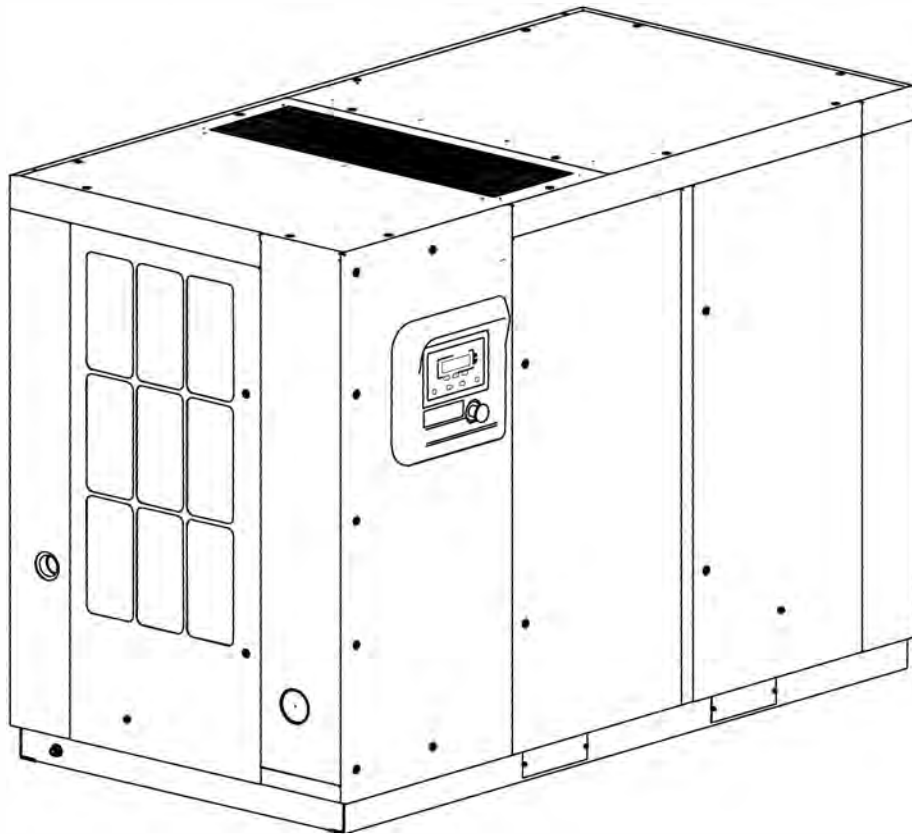




R90 - 110N
R90 - 110I
PARTS MANUAL



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1	ABBREVIATIONS & SYMBOLS
1	GENERAL INFORMATION
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127-133	ASSY, STARTER BOX 90-110KW 400V 50 HZ, (AIR COOLED - Y/D)
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135	ASSEMBLY, BACKPANEL (90-110kW AIR CLD VSD / 400V 50 Hz)
136	ASSEMBLY, BACKPANEL (90-110kW WTR CLD VSD / 380-575V 60 Hz)
137	ASSEMBLY, BACKPANEL (90-110kW WTR CLD VSD - 400V 50 Hz)
138	ASSEMBLY, BACKPANEL (90-110kW / 380-575V 60 Hz)
139	ASSEMBLY, BACKPANEL (90-110kW - 400V 50 Hz)
140	ASSEMBLY, BACKPANEL (90-110kW - SOLID STATE 60 Hz)
141	ASSEMBLY, BACKPANEL (90-110kW - SOLID STATE 50 Hz)
142	STARTER BOX PARTS
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166	SERVICE

ABBREVIATIONS & SYMBOLS

####	Contact Ingersoll Rand for serial no.
-> ####	Up to serial no.
#### ->	From serial no.
* Not	illustrated
† Option	
NR Not	required
AR As	required
VSD	Variable speed drive
FS Fixed	speed

GENERAL INFORMATION

General

This manual, which contains an illustrated parts breakdown, has been prepared as an aid in identifying and ordering parts for the machine. All of the parts listed in the parts breakdown are manufactured with the same precision as the original equipment.

Ingersoll Rand Company service facilities and parts are available worldwide. There are Ingersoll Rand branch offices and authorized distributors located in the principle cities of the United States. In Canada, our customers are serviced by the Canadian Ingersoll Rand Company, limited. There are also Ingersoll Rand Company subsidiaries and authorized distributors located in the principle cities throughout the world.

Description

The illustrated parts breakdown identifies the various assemblies, sub-assemblies and detailed parts which make up this machine.

A series of illustrations show each part clearly and in its correct location relative to other parts in the illustration. Each part in an illustration is referenced with a number. The number, description and quantity needed per assembly are listed.

How to use this parts manual

1. Locate the desired illustration
2. Locate the part on the illustration by visual identification and note the item number.
3. Find the reference number on the corresponding parts table, along with the part number and description.

How to order parts

In order that all avoidable errors are eliminated when ordering parts, please specify the following:

- The model number of the unit as shown on the compressor data plate
- The serial number of the unit as shown on the compressor data plate
- The motor data code shown on the motor data plate
- The number of this manual
- The part number, description and quantity needed exactly as listed.



Part Number : **23461080**

2

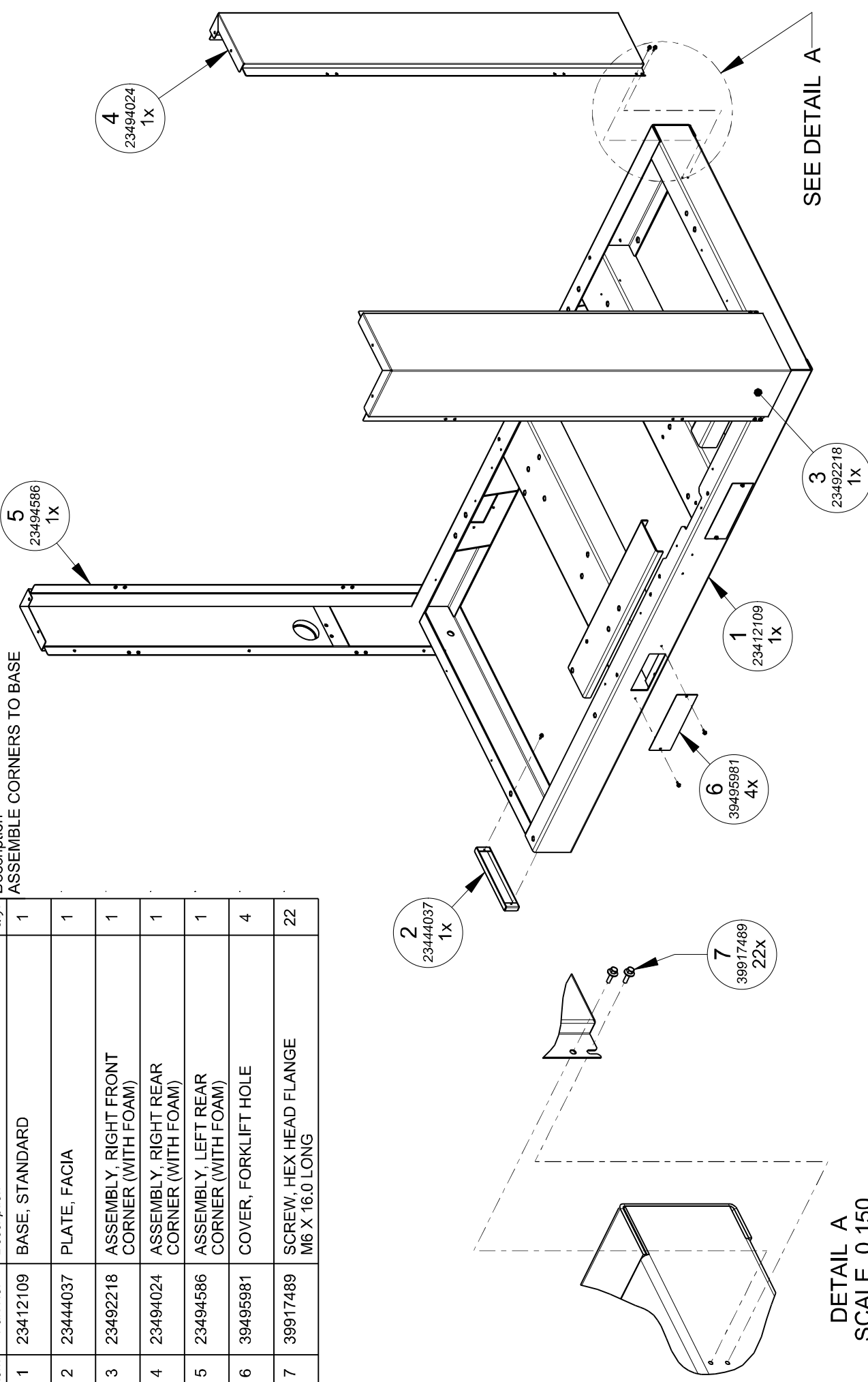
Title :

**ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

REV **B**

Item	Part No.	Description	Qty.
1	23412109	BASE, STANDARD	1
2	23444037	PLATE, FACIA	1
3	23492218	ASSEMBLY, RIGHT FRONT CORNER (WITH FOAM)	1
4	23494024	ASSEMBLY, RIGHT REAR CORNER (WITH FOAM)	1
5	23494586	ASSEMBLY, LEFT REAR CORNER (WITH FOAM)	1
6	39495981	COVER, FORKLIFT HOLE	4
7	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	22

Description
ASSEMBLE CORNERS TO BASE



**DETAIL A
SCALE 0.150**



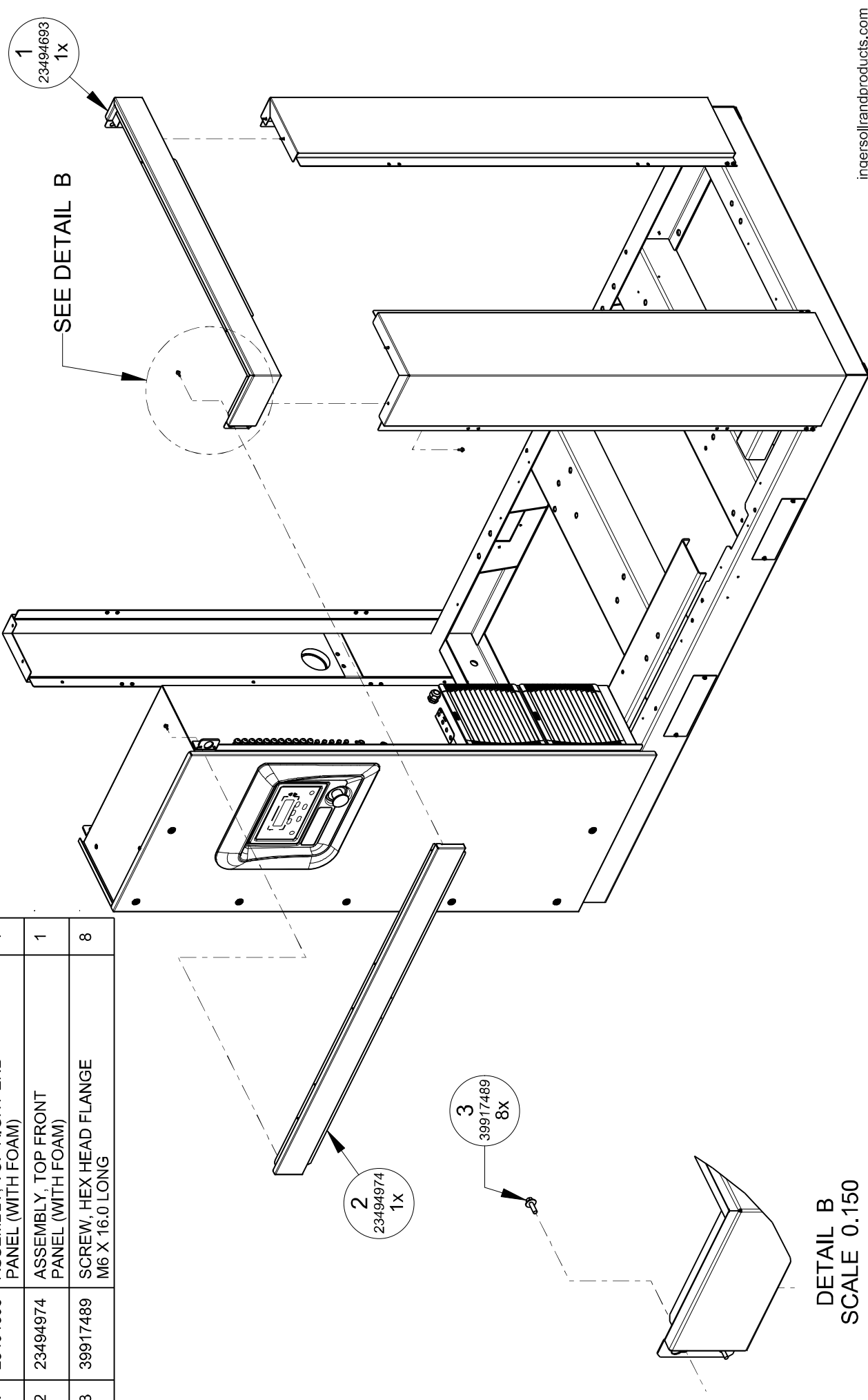
Part Number : **23461080**

Title : **ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

REV **B**

Item	Part No.	Description	Qty.
1	23494693	ASSEMBLY, TOP RIGHT END PANEL (WITH FOAM)	1
2	23494974	ASSEMBLY, TOP FRONT PANEL (WITH FOAM)	1
3	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	8

Description
ASSEMBLE TOP FRONT AND TOP RIGHT END BAND



DETAIL B
SCALE 0.150



4

Part Number :

23461080

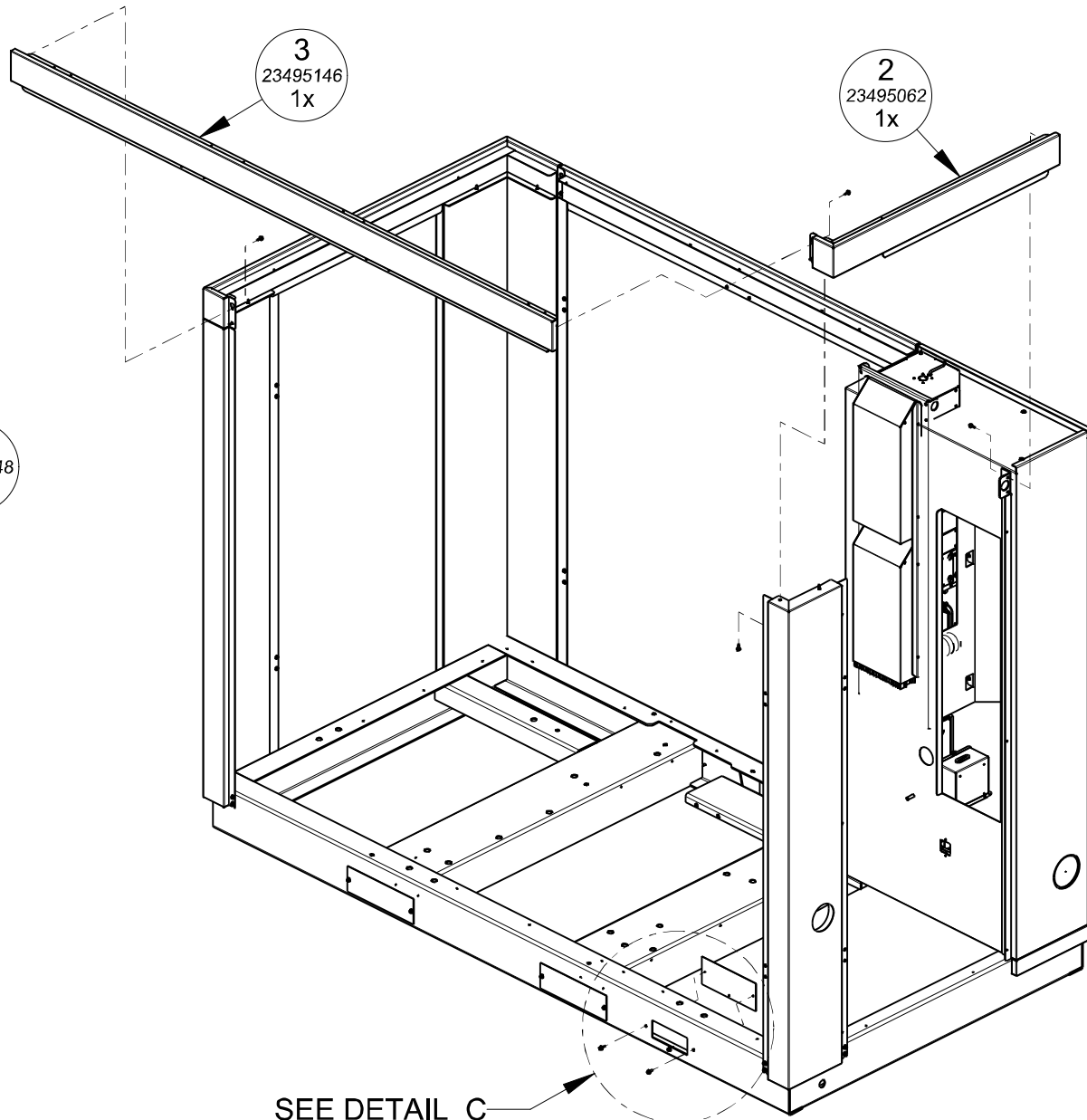
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**ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

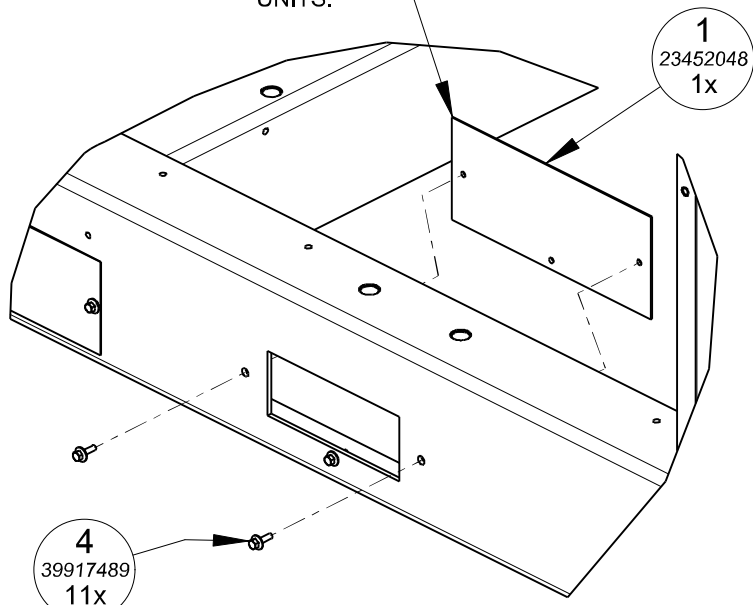
REV
B

Item	Part No.	Description	Qty.
1	23452048	PLATE, WATER CONNECTION COVER	1
2	23495062	ASSEMBLY, TOP LEFT END PANEL (WITH FOAM)	1
3	23495146	ASSEMBLY, TOP REAR PANEL (WITH FOAM)	1
4	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	11

Description
ASSEMBLE TOP REAR AND TOP LEFT END BAND



DO NOT USE
P/N 23452048 FOR
WATER COOLED UNITS
OR AIR COOLED ERS
UNITS.



DETAIL C
SCALE 0.150

SEE DETAIL C



Ingersoll Rand
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Part Number :

23461080

Title :

**ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

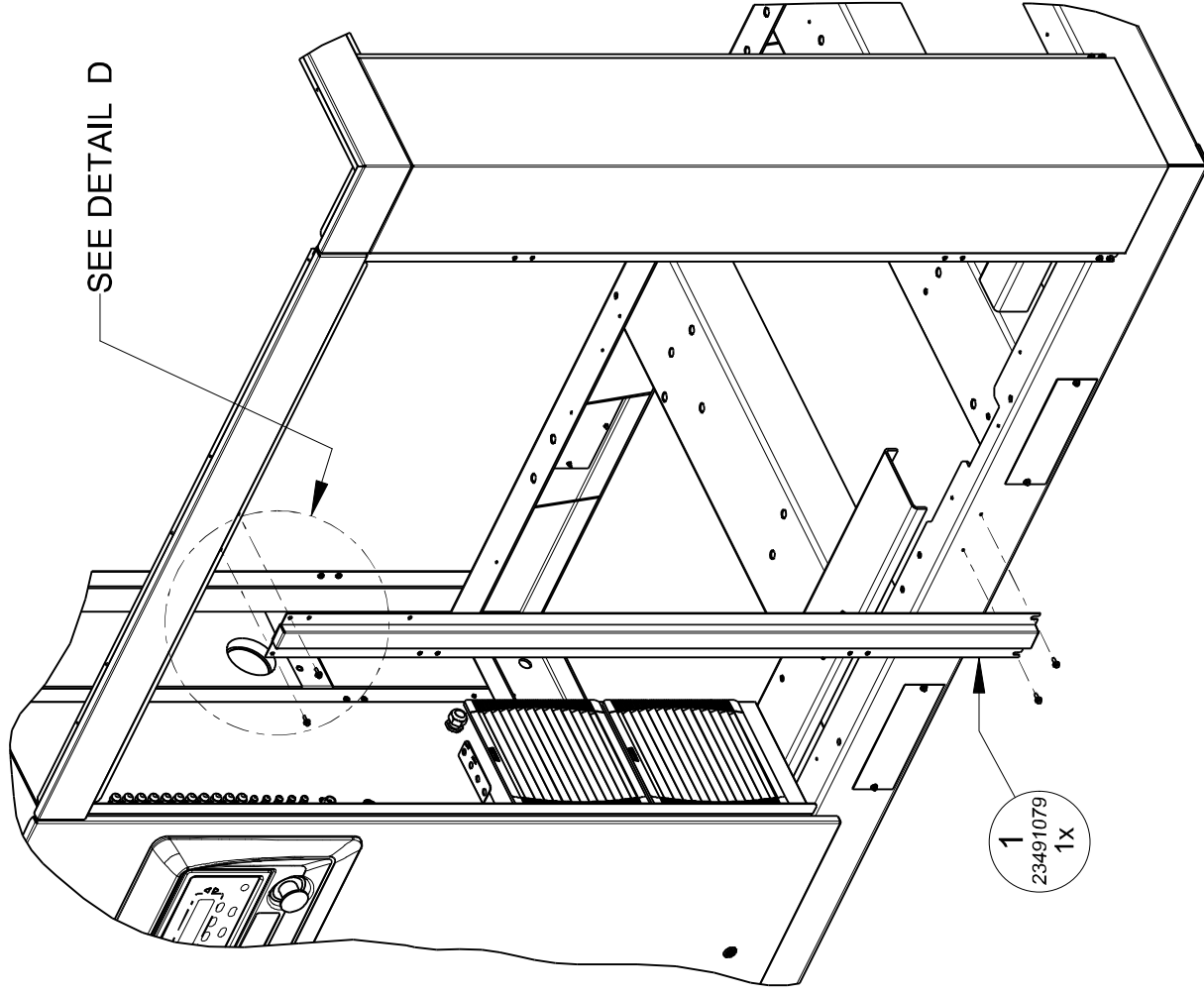
REV

B

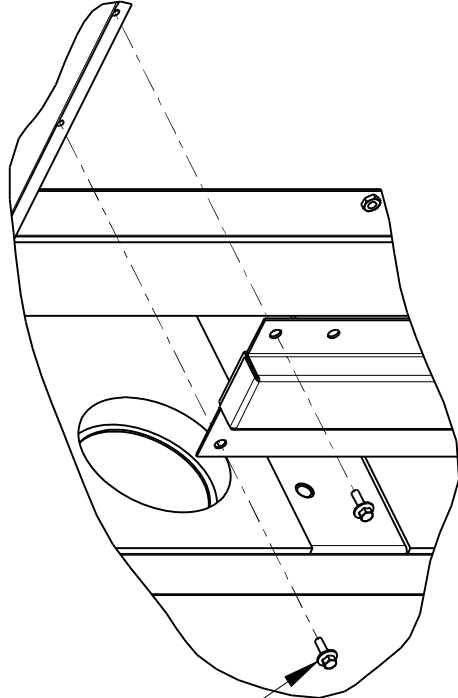
Item	Part No.	Description	Qty.
1	23491079	ASSEMBLY, VERTICAL SUPPORT (WITH FOAM)	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	4

Description
ASSEMBLE COMMON VERTICAL SUPPORT TO THE FRONT

SEE DETAIL D



1
23491079
1X



2
39917489
4X

DETAIL D
SCALE 0.200



Ingersoll Rand
Industrial Technologies

Part Number : **23461080**

REV **B**

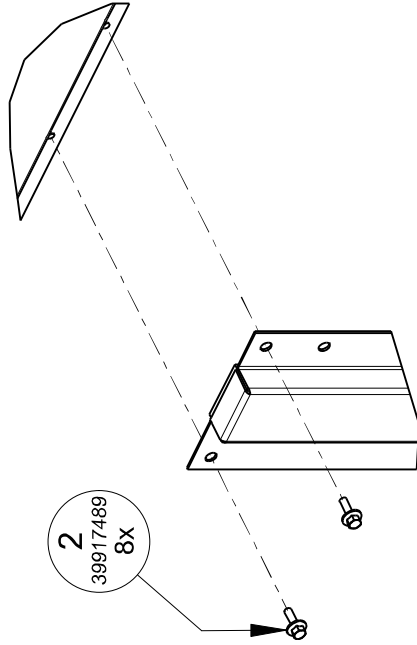
Title : **ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

6

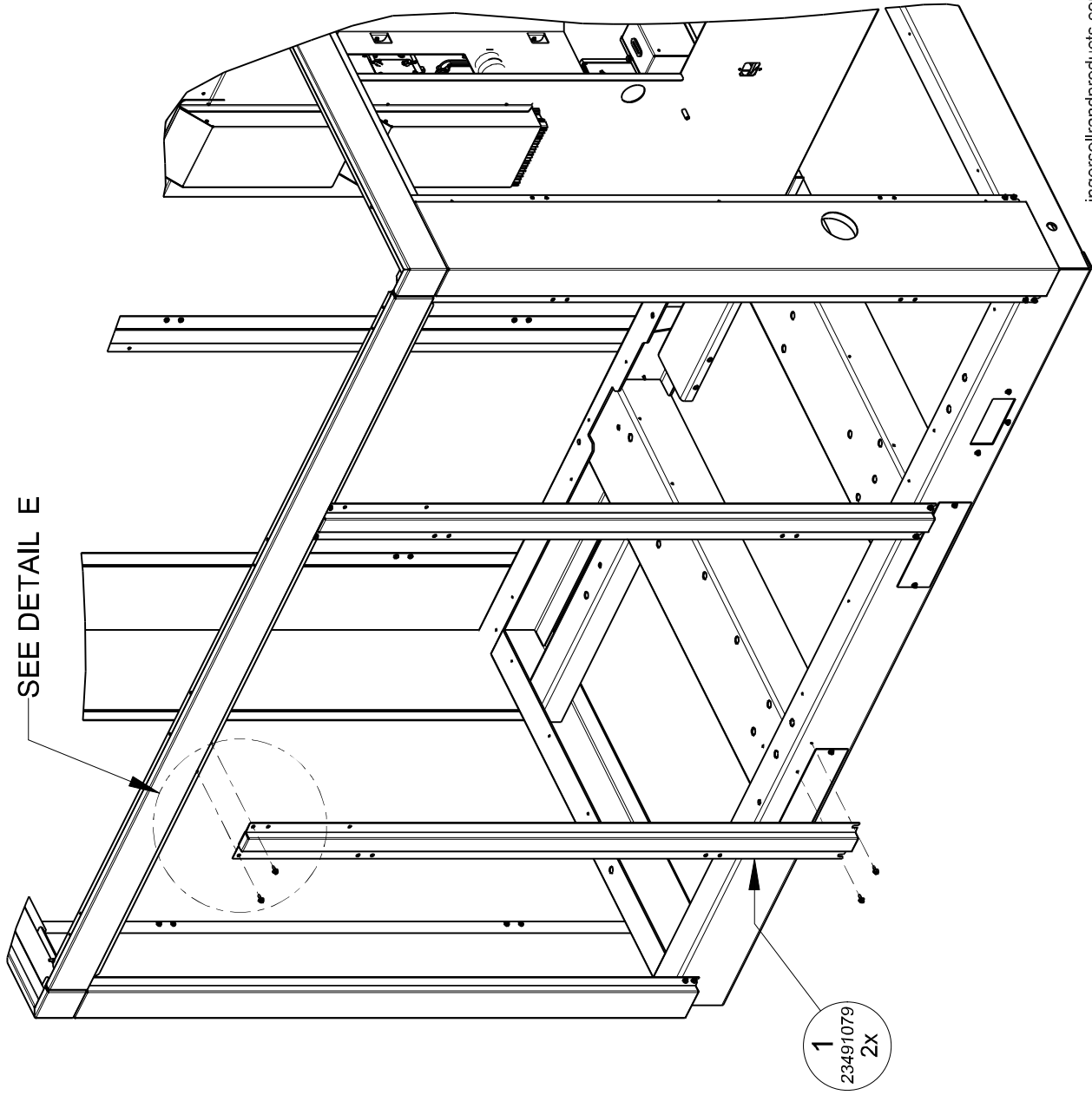
Item	Part No.	Description	Qty.
1	23491079	ASSEMBLY, VERTICAL SUPPORT (WITH FOAM)	2
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	8

Description
ASSEMBLE COMMON VERTICAL SUPPORTS TO REAR OF PACKAGE

SEE DETAIL E



DETAIL E
SCALE 0.200





Ingersoll Rand
Industrial Technologies

7

Part Number : **23461080**

Title :

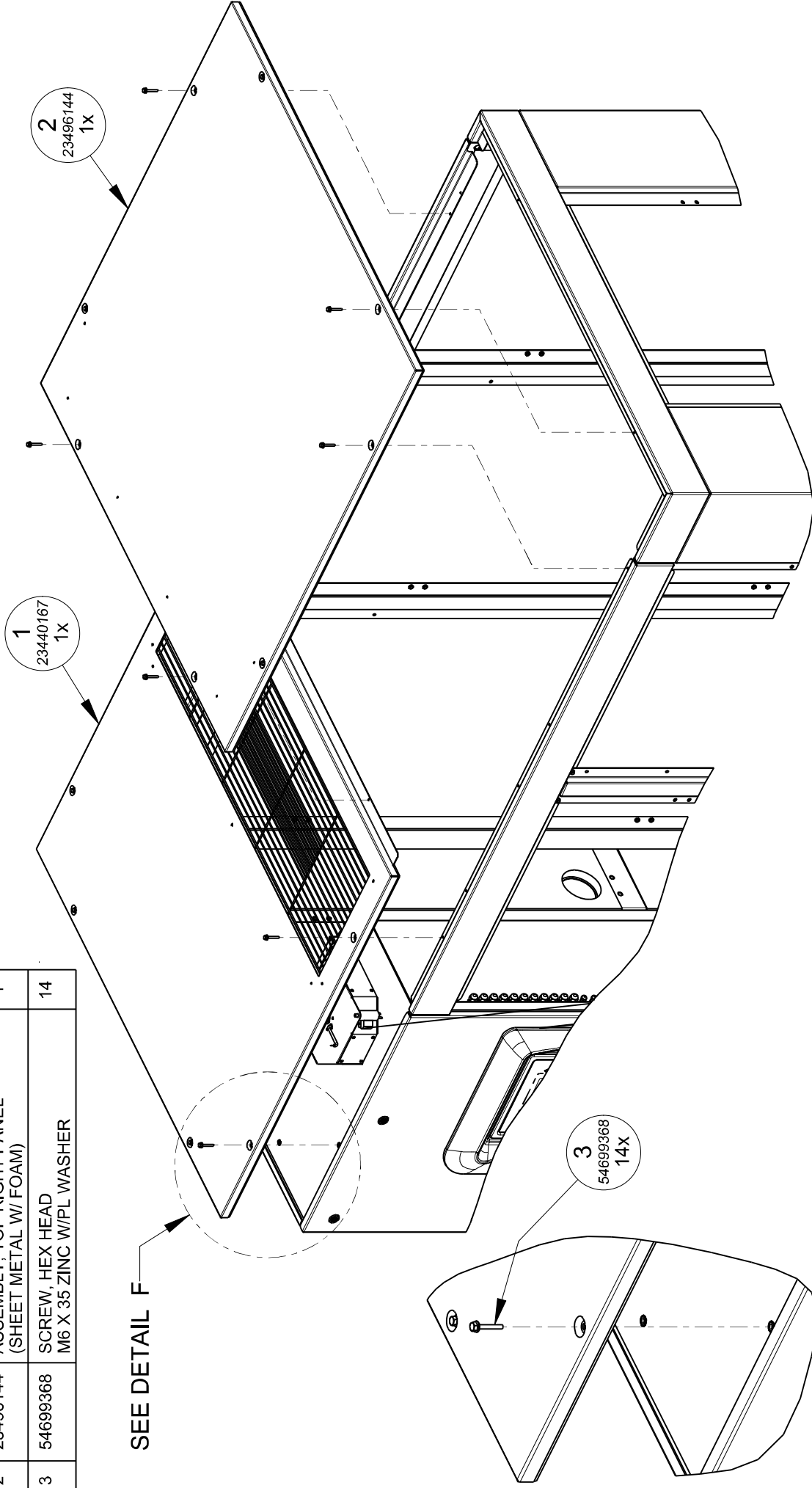
**ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

REV

B

Description
ASSEMBLE TOP PANELS

Item	Part No.	Description	Qty.
1	23440167	ASSEMBLY, TOP LEFT PANEL (SHEET METAL W/ FOAM)	1
2	23496144	ASSEMBLY, TOP RIGHT PANEL (SHEET METAL W/ FOAM)	1
3	54699368	SCREW, HEX HEAD M6 X 35 ZINC W/PL WASHER	14



SEE DETAIL F

DETAIL F
SCALE 0.150



Ingersoll Rand
Industrial Technologies

Part Number : **23461080**

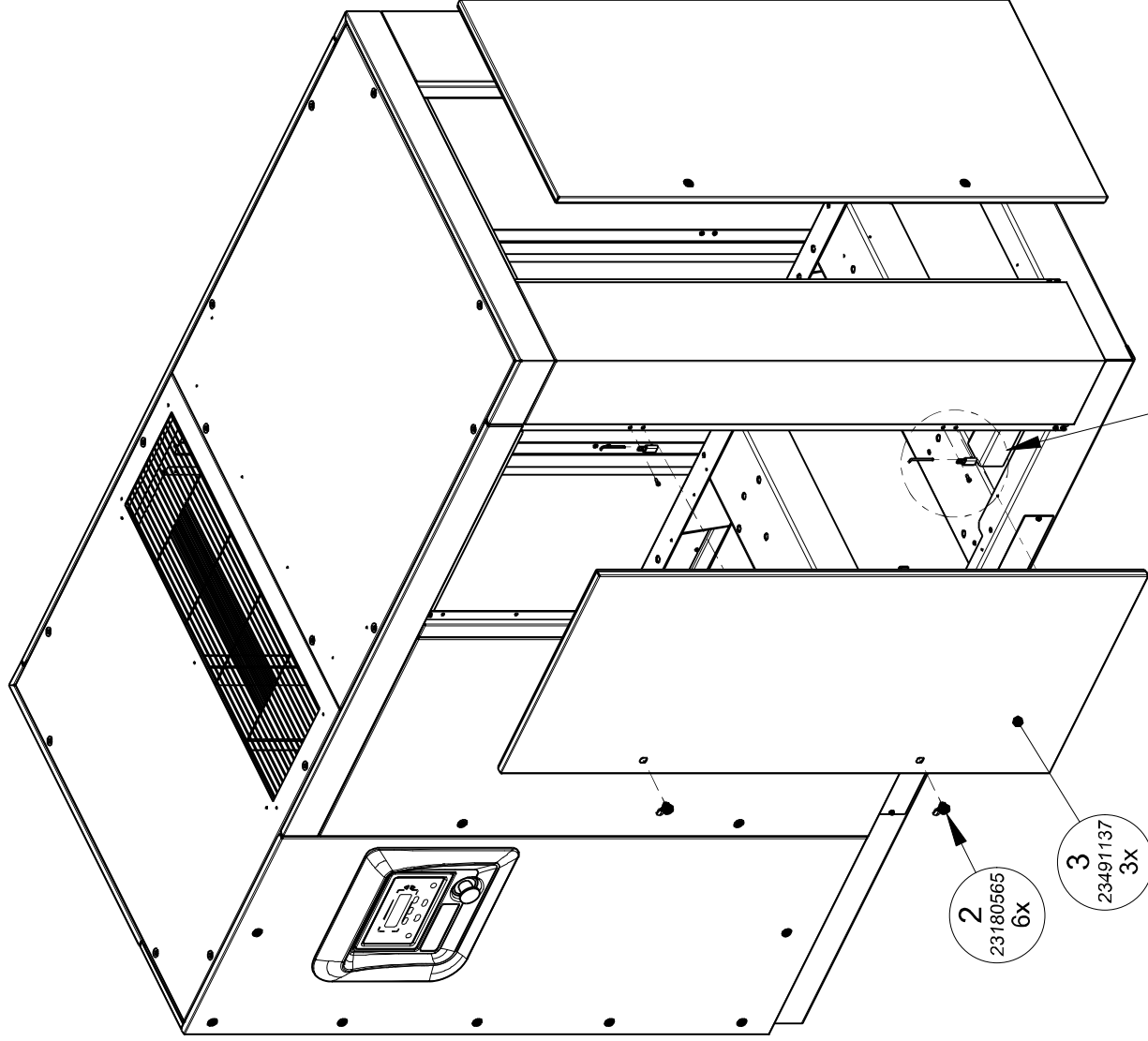
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(AIR & WATER COOLED)**

REV **B**

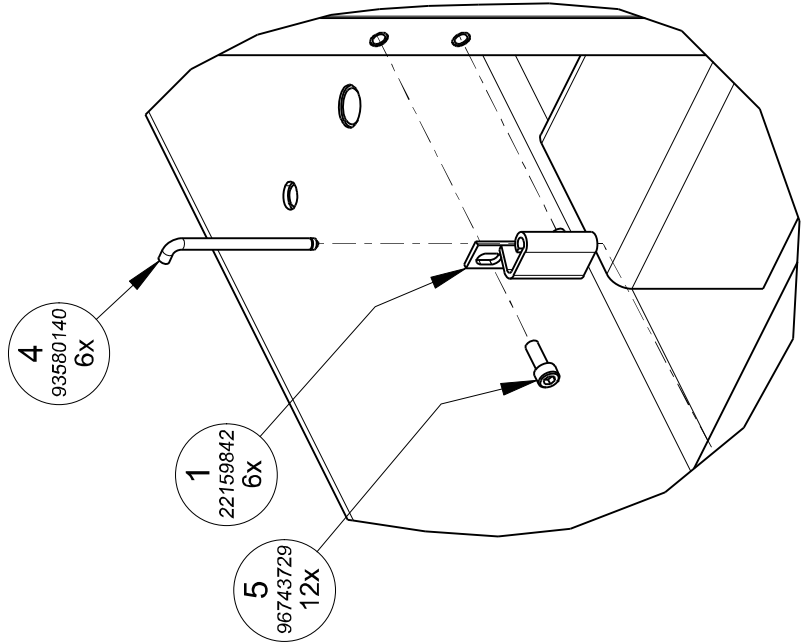
8

Item	Part No.	Description	Qty.
1	22159842	HINGE, PIN HALF	6
2	23180565	LATCH, DOOR (NEMA 4) 28mm HEAD / 24mm OFFSET	6
3	23491137	ASSEMBLY, COMMON DOOR (WITH FOAM)	3
4	93580140	HINGE, PIN	6
5	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	12

Description
ASSEMBLE COMMON DOORS TO THE FRONT AND RIGHT END OF THE COMPRESSOR



SEE DETAIL G



DETAIL G
SCALE 0.300

ingersollrandproducts.com



Ingersoll Rand
Industrial Technologies

Part Number : **23461080**

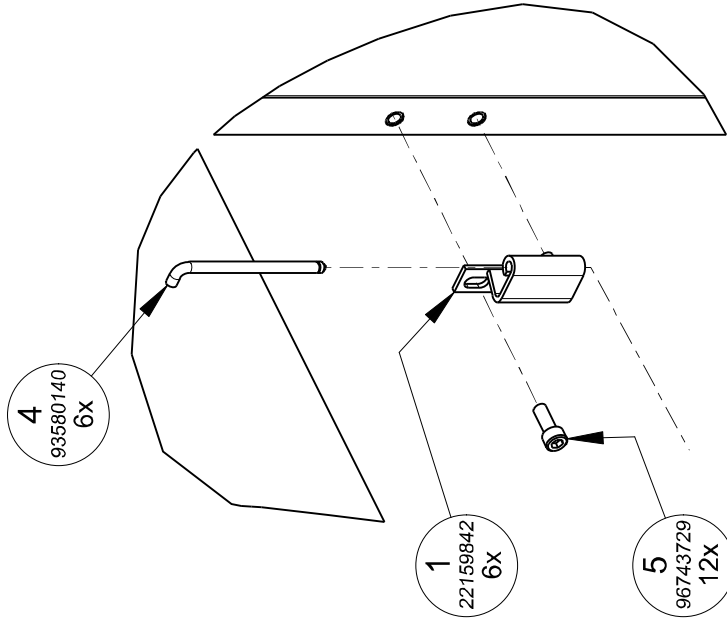
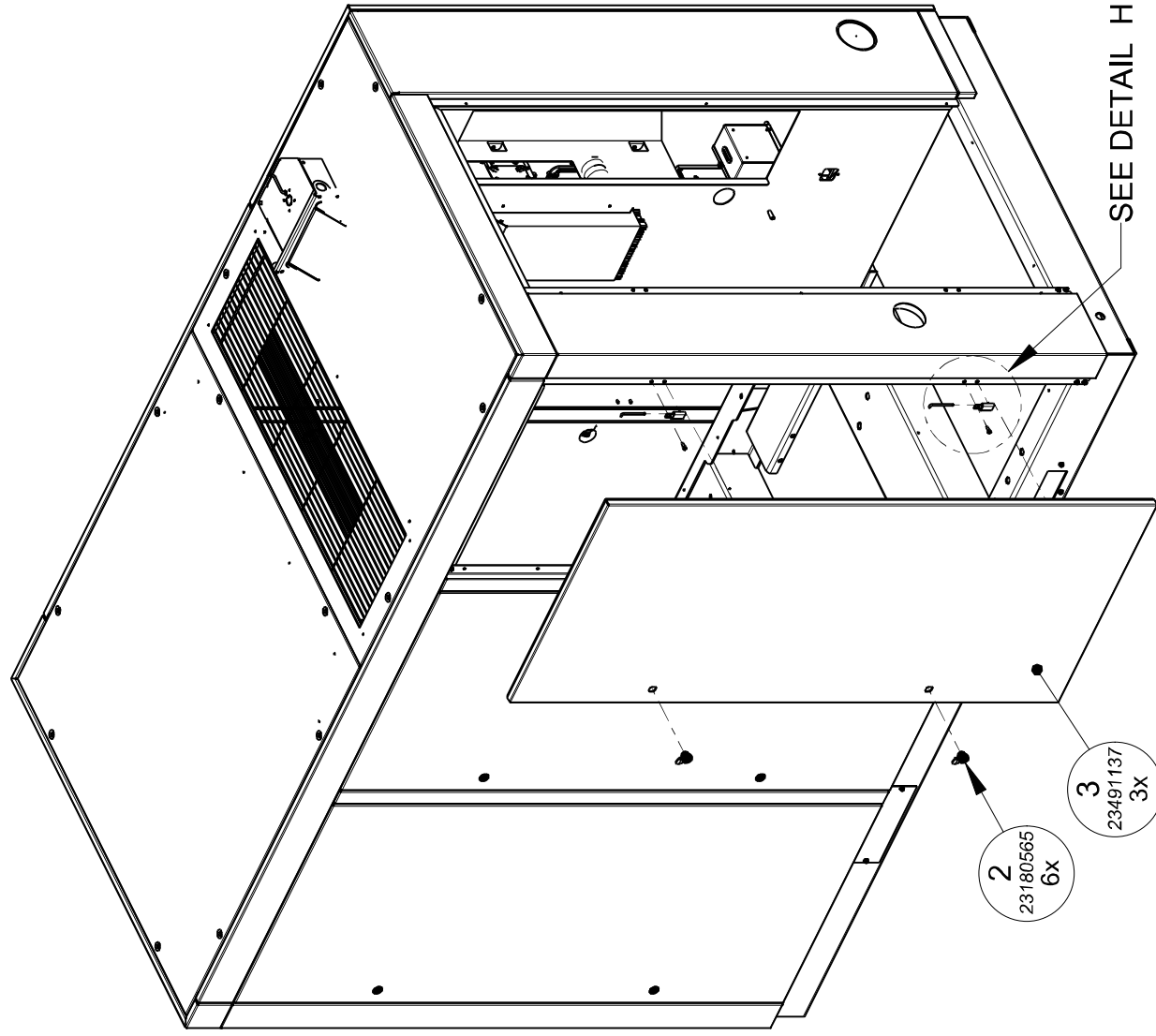
Title : **ASSEMBLY INST., ENCLOSURE
(AIR & WATER COOLED)**

REV **B**

9

Item	Part No.	Description	Qty.
1	22159842	HINGE, PIN HALF	6
2	23180565	LATCH, DOOR (NEMA 4) 28mm HEAD / 24mm OFFSET	6
3	23491137	ASSEMBLY, COMMON DOOR (WITH FOAM)	3
4	93580140	HINGE, PIN	6
5	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	12

Description
ASSEMBLE COMMON DOORS TO THE REAR OF THE COMPRESSOR



DETAIL H
SCALE 0.300

SEE DETAIL H



Part Number : **23463482**

10

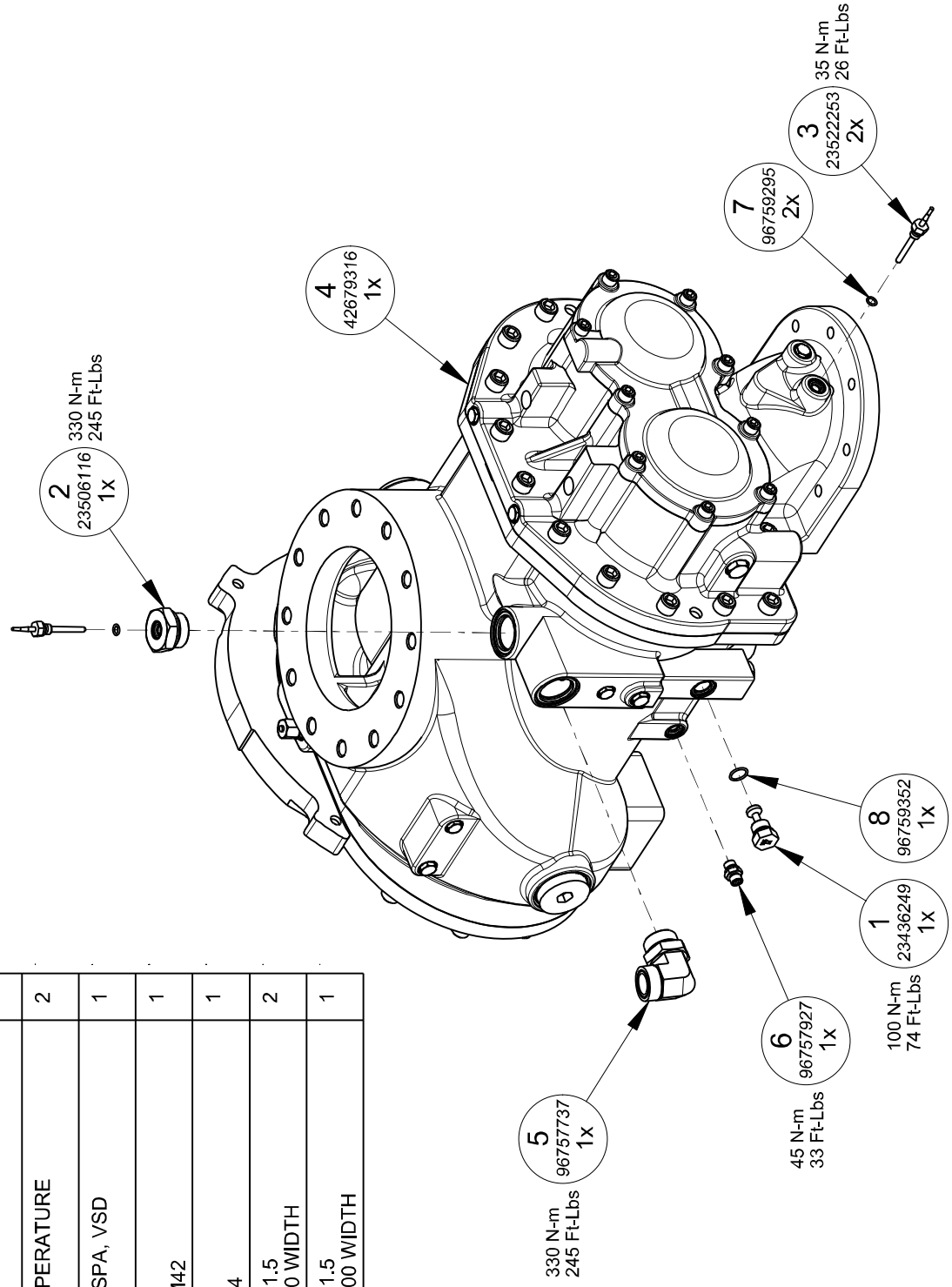
Title :

**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV **D**

Item	Part No.	Description	Qty.
1	23436249	ORIFICE, INJECTION 18.5 DIA	1
2	23506116	ADAPTER, M42 X M12 ISO 6149	1
3	23522253	SENSOR, TEMPERATURE THERMISTOR	2
4	42679316	ASSY, 226mm SPA, VSD VSD AIREND	1
5	96757737	ELBOW, 90 1.25 TUBE X M42	1
6	96757927	CONNECTOR .25 TUBE X M14	1
7	96759295	ORING, M12 X 1.5 9.300 ID X 2.200 WIDTH	2
8	96759352	ORING, M22 X 1.5 19.300 ID X 2.200 WIDTH	1

Description
ASSEMBLE INJECTION ORIFICE, OIL FEED FITTING AND OIL SCAVENGE FITTING.





Ingersoll Rand
Industrial Technologies

Part Number : **23463482**

11

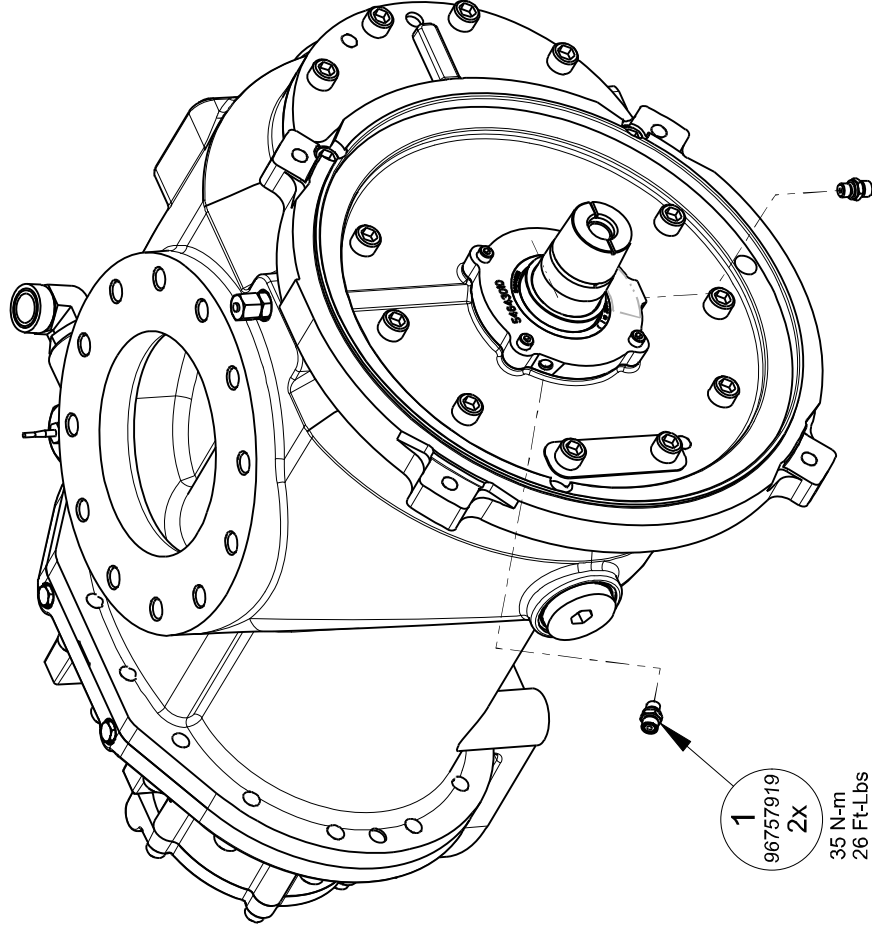
Title :

**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV

D

Item	Part No.	Description	Qty.	Description
1	96757919	CONNECTOR .25 TUBE X M12	2	ASSEMBLE OIL FEED FITTINGS.





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Industrial Technologies

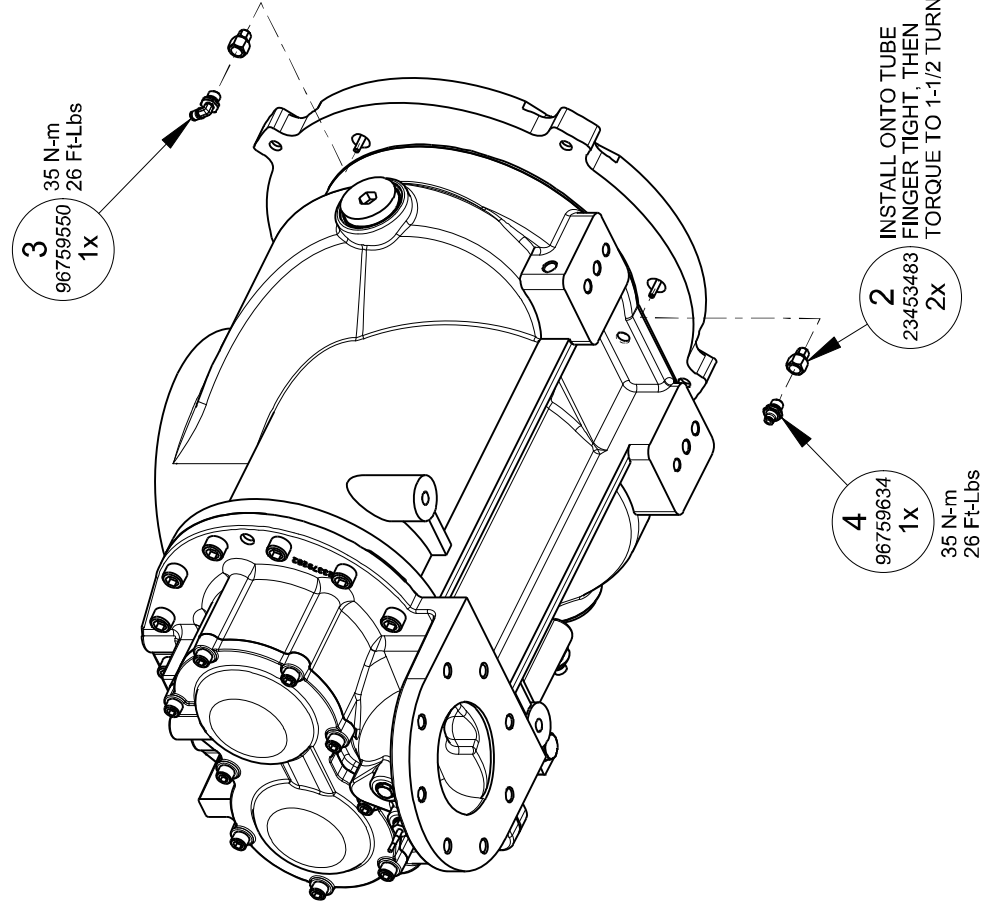
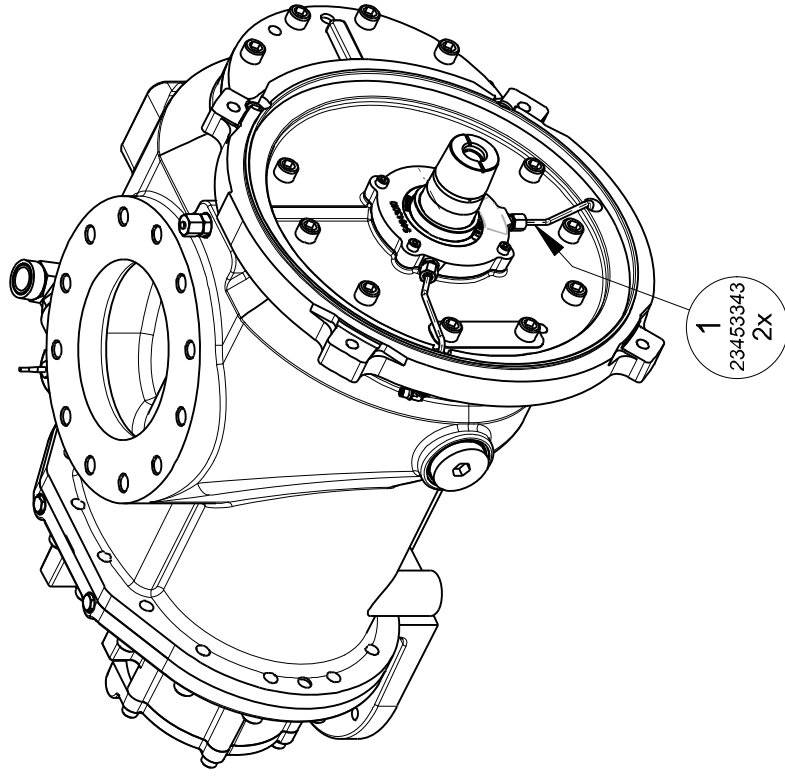
Part Number : **23463482**

12

Title : **ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV **D**

Item	Part No.	Description	Qty.	Description
1	23453343	TUBE, SEAL SCAVENGE	2	ASSEMBLE OIL TUBE AND END FITTINGS.
2	23453483	CONNECTOR, 6MM TUBE X .25 BSPP (FEMALE)	2	
3	96759550	ELBOW, PUSH IN G1/4 X 6 MM TUBE	1	
4	96759634	CONNECTOR, PUSH IN G1/4 X 6 MM TUBE	1	





Part Number : 23463482

13

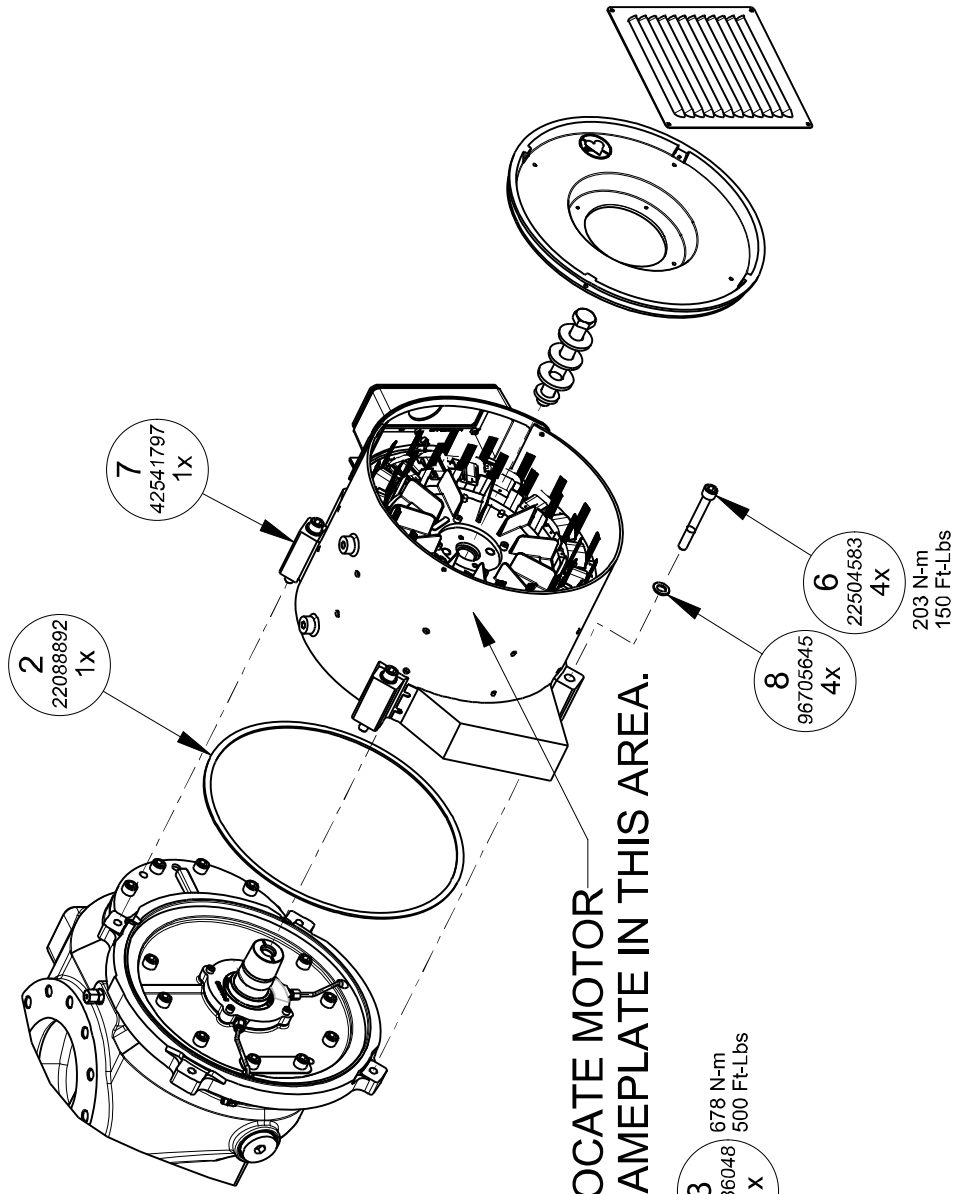
REV **D**
**ASSEMBLY INST., DRIVETRAIN
 (VARIABLE SPEED)**

Description
 ASSEMBLE MOTOR TO AIREND.

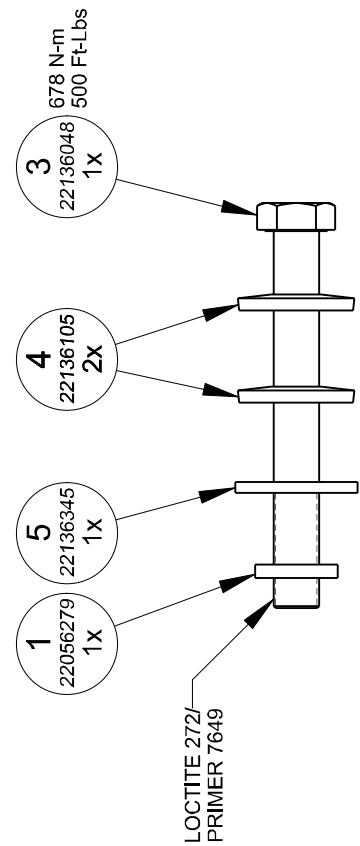
Item	Part No.	Description	Qty.
1	22056279	SPACER, 44MM OD	1
2	22088892	GASKET, VITON	1
3	22136048	BOLT, HEX HEAD M24 X 200MM	1
4	22136105	WASHER, 25MM BELLEVILLE SPRING	2
5	22136345	WASHER, 25MM LARGE O.D. SAE HARDENED	1
6	22504583	SCREW, M16 X 130 SOCKET HEAD CAP W/ EPOXY COATED THREADS	4
7	42541797	ASSEMBLY, ROTOR/STATOR S/A N110KW/150HP	1
8	96705645	WASHER, PRODUCT GRADE A M16	4

NOTES:

1. USE FEELER GAGE TO CHECK CLEARANCE BETWEEN ROTOR AND STATOR.



LOCATE MOTOR NAMEPLATE IN THIS AREA.



LOCTITE 272 PRIMER 7649

NOTE ORIENTATION OF 22136105 WASHERS.



Part Number : **23463482**

14

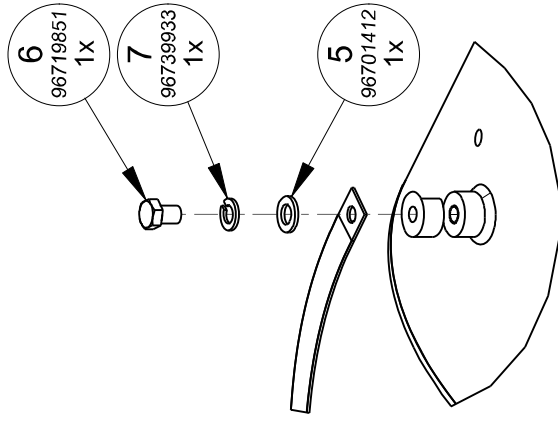
Title :

**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV **D**

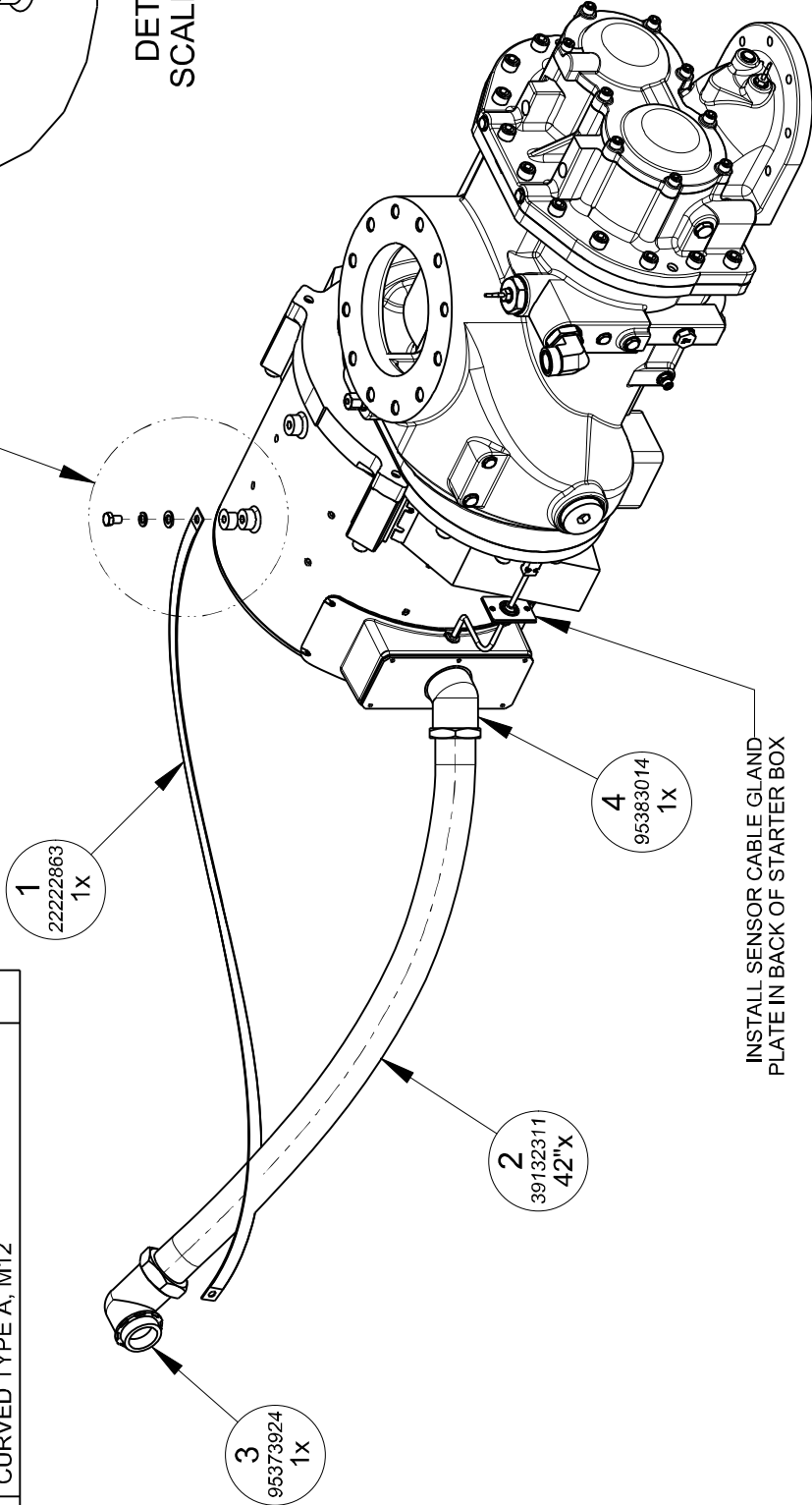
Item	Part No.	Description	Qty.
1	22222863	STRAP, EARTH GROUND 1500MM LONG	1
2	39132311	CONDUIT, 2" SEALTITE GREY	42"
3	95373924	ELBOW, INSULATED THROAT 2.00 NPT X 2.00 CONDUIT	1
4	95383014	ELBOW, INSULATED THROAT 2.00 NPT X 2.00 CONDUIT	1
5	96701412	WASHER, PLAIN GRADE C, 12	1
6	96719851	SCREW, HEX HEAD M12-1.75 X 16.0 LONG	1
7	96739933	WASHER, SPRING LOCK, CURVED TYPE A, M12	1

Description
ASSEMBLE GROUND STRAP AND CONDUIT.



DETAIL A
SCALE 0.200

SEE DETAIL A





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Part Number : **23463482**

15

Title :

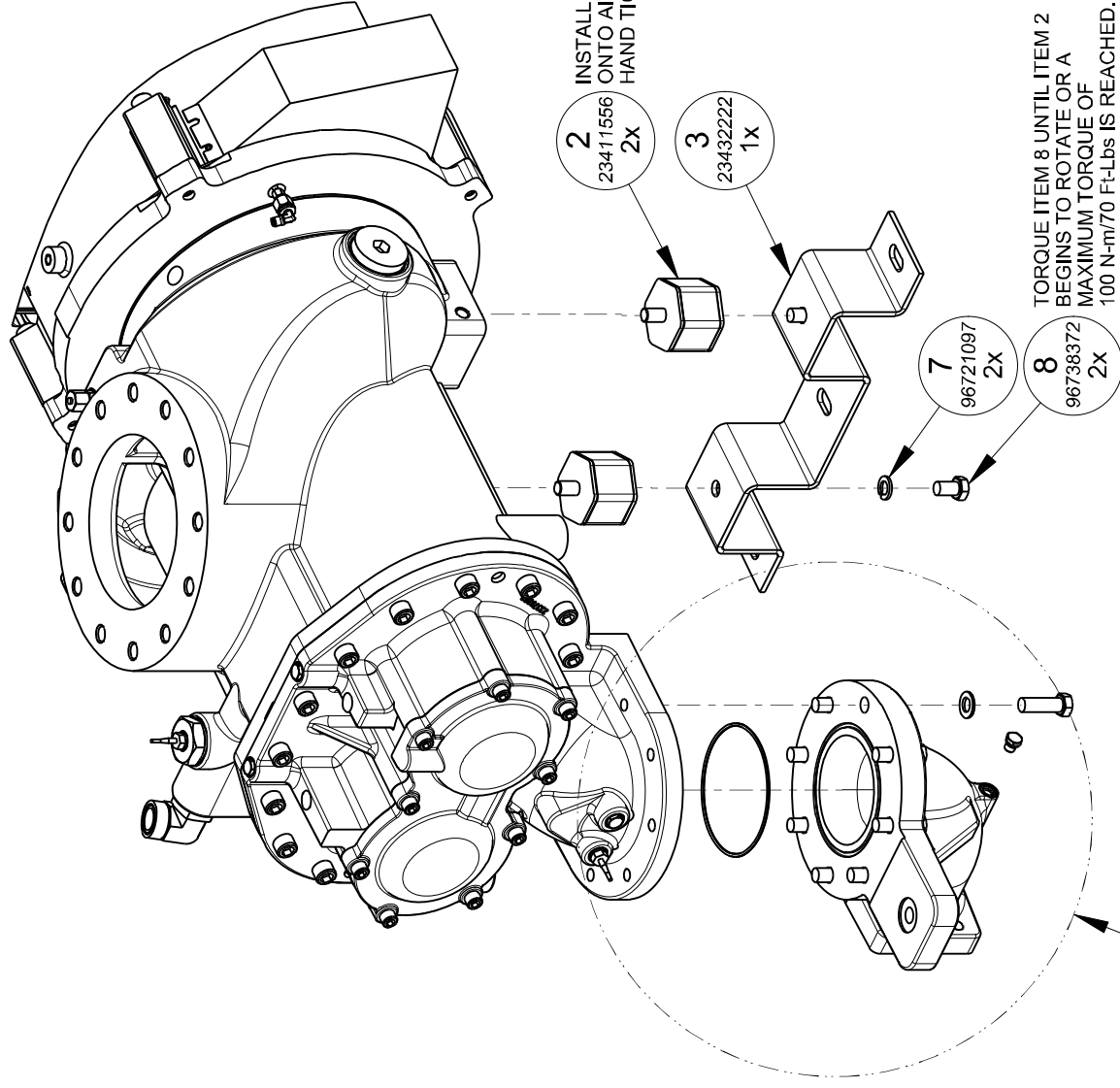
**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV

D

Description
ASSEMBLE ISOLATION MOUNTS, AIREND MOUNT AND DISCHARGE ELBOW TO AIREND.

Item	Part No.	Description	Qty.
1	23389349	ELBOW, DISCHARGE 226 AIREND (MACH)	1
2	23411556	MOUNT, ISOLATION DUROMETER 75	2
3	23432222	SUPPORT, VSD DRIVETRAIN	1
4	95023396	ORING, STANDARD -256 5.750 ID X .125 WIDTH	1
5	96703962	SCREW, HEX HEAD M16-2.00 X 50.0 LONG	8
6	96705645	WASHER, PRODUCT GRADE A M16	8
7	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
8	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	2
9	96757000	PLUG, HEX HEAD M12	1



2 23411556
2X

3 23432222
1X

1 23389349
1X

6 96705645
8X

5 96703962
8X

200 N·m
150 Ft-Lbs

4 95023396
1X

9 96757000
1X

35 N·m
26 Ft-Lbs

7 96721097
2X

8 96738372
2X

TORQUE ITEM 8 UNTIL ITEM 2
BEGINS TO ROTATE OR A
MAXIMUM TORQUE OF
100 N·m/70 Ft-Lbs IS REACHED.

DETAIL B
SCALE 0.125

SEE DETAIL B



Part Number : **23463482**

16

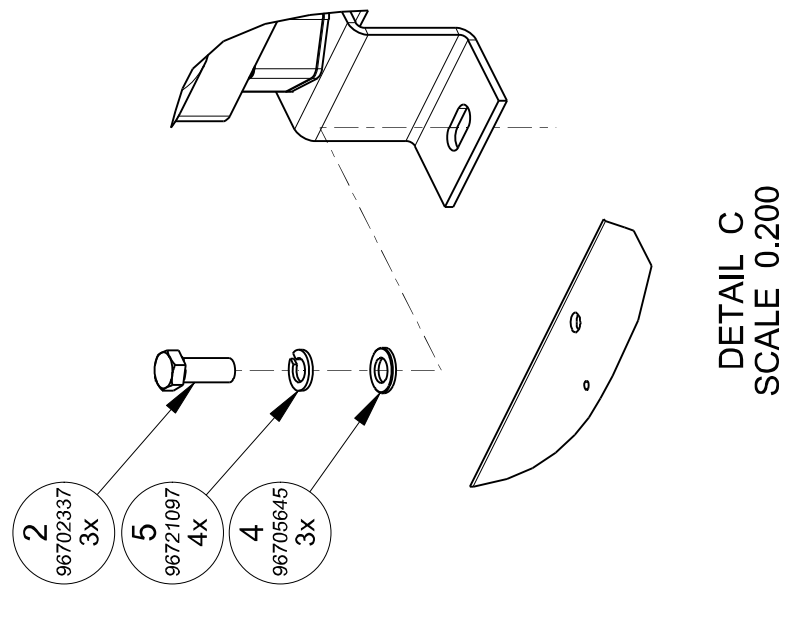
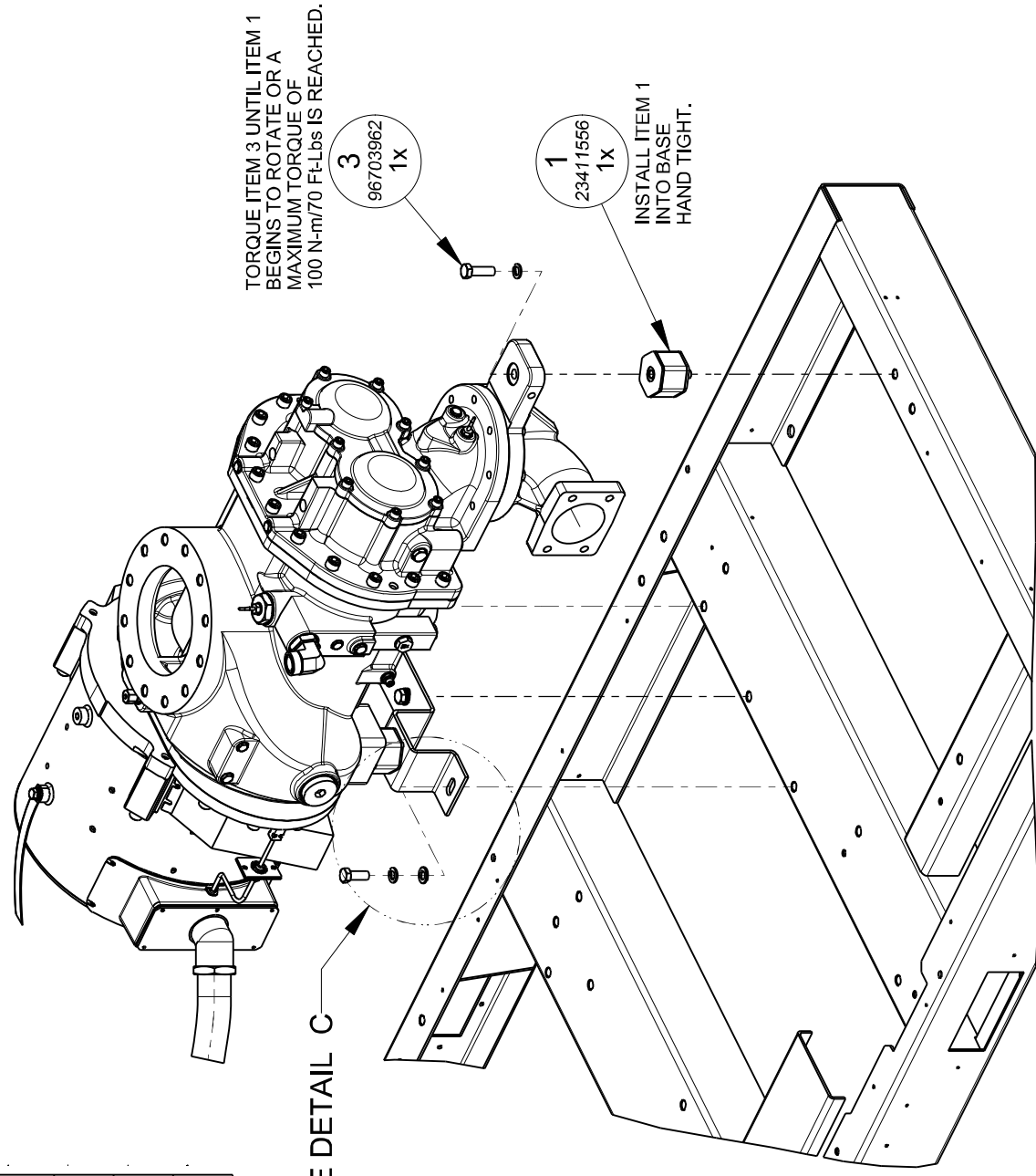
Title :

**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV **D**

Item	Part No.	Description	Qty.
1	23411556	MOUNT, ISOLATION DUROMETER 75	1
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	3
3	96703962	SCREW, HEX HEAD M16-2.00 X 50.0 LONG	1
4	96705645	WASHER, PRODUCT GRADE A M16	3
5	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	4

Description
ASSEMBLY MOUNT AIREND/MOTOR TO BASE.





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Industrial Technologies

Part Number : **23463482**

17

Title :

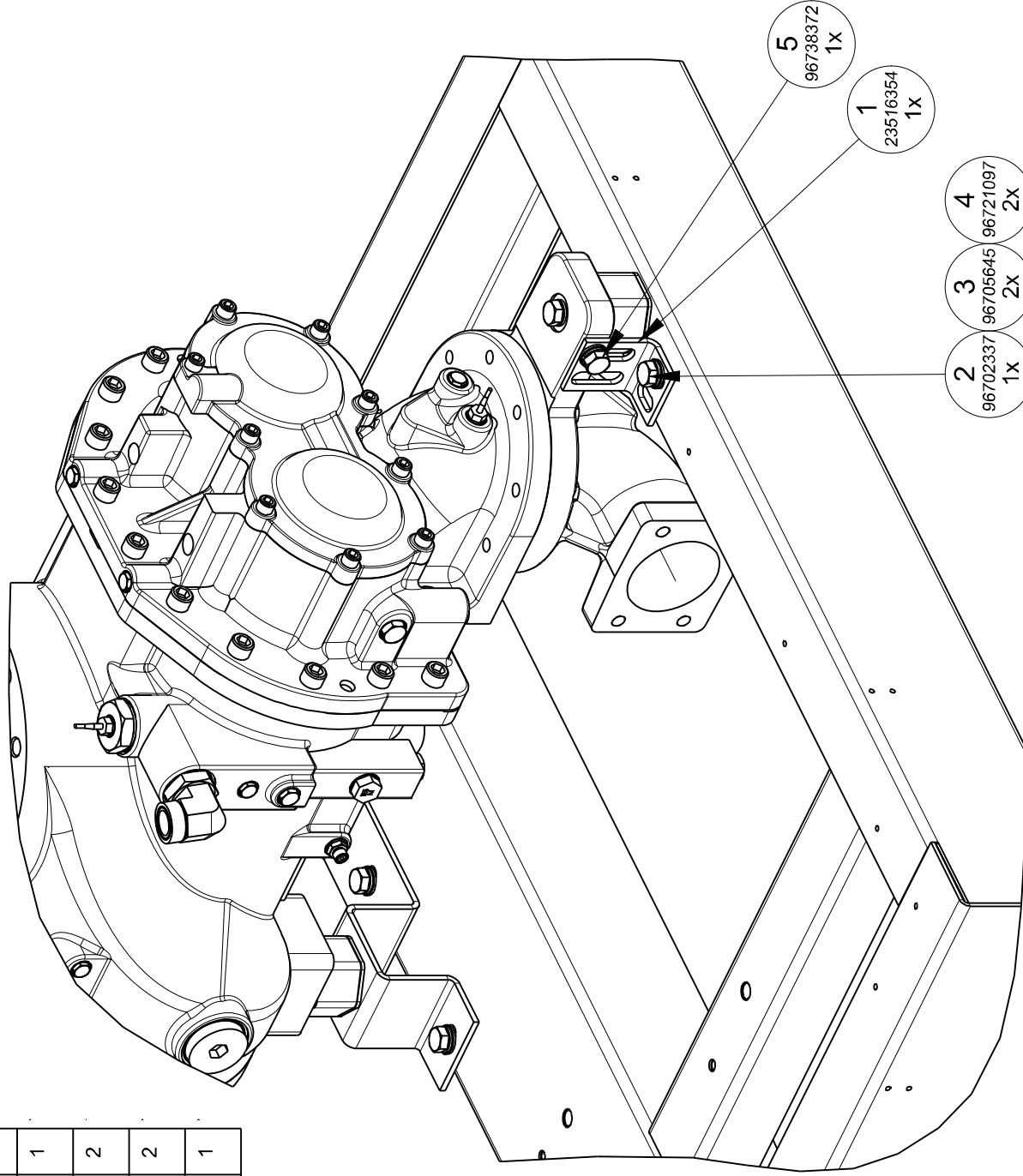
**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	23516354	BRACE, AIREND SHIPPING AT DISCHARGE ELOW	1
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	1
3	96705645	WASHER, PRODUCT GRADE A M16	2
4	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
5	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	1

Description
ASSEMBLY AIREND SHIPPING BRACE.



5
96738372
1X

1
23516354
1X

4
96721097
2X

3
96705645
2X

2
96702337
1X



Ingersoll Rand
Industrial Technologies

Part Number : **23463482**

18

Title :

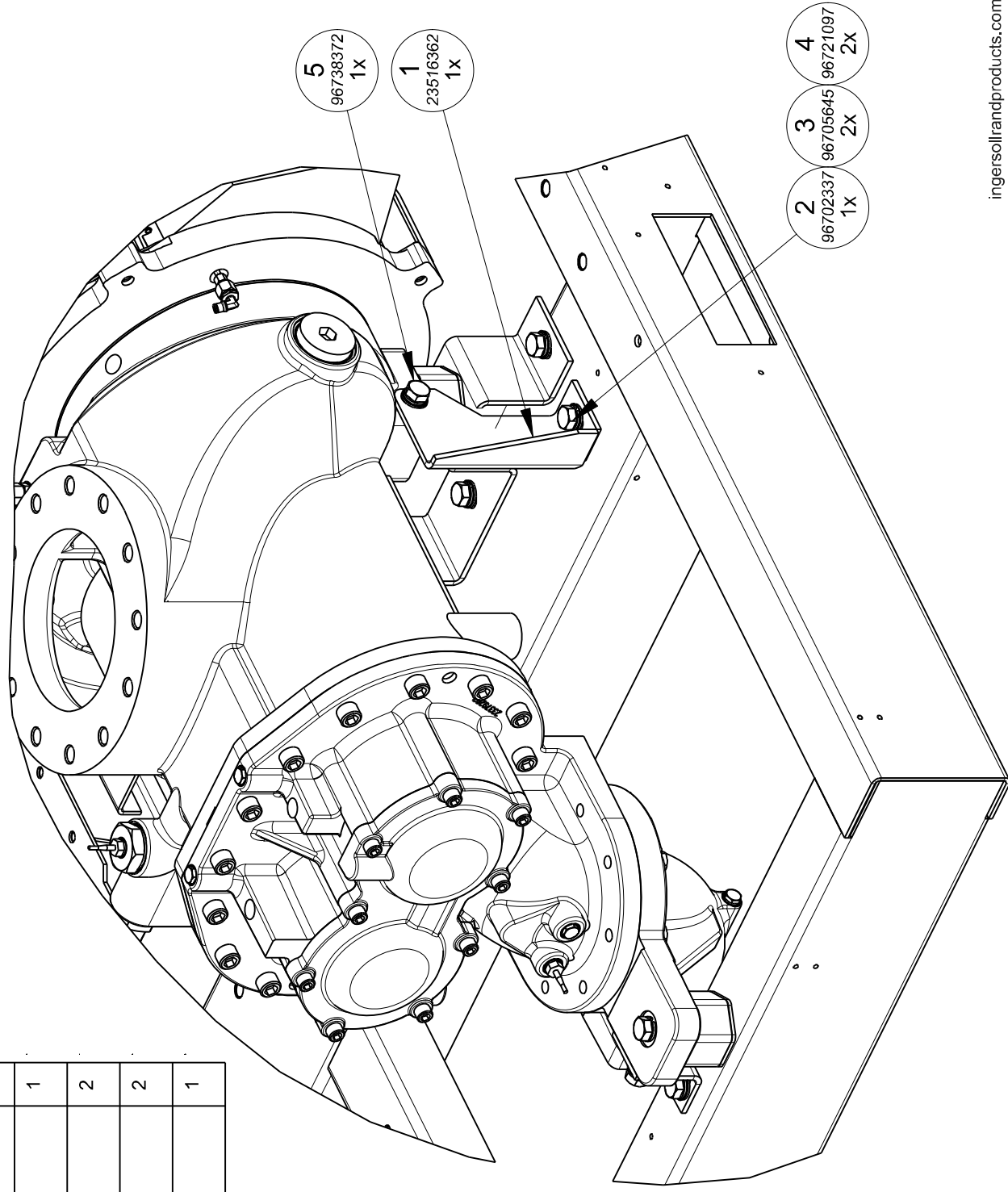
**ASSEMBLY INST., DRIVETRAIN
(VARIABLE SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	23516362	BRACE, AIREND SHIPPING	1
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	1
3	96705645	WASHER, PRODUCT GRADE A M16	2
4	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
5	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	1

Description
ASSEMBLE MOTOR SHIPPING BRACE.



5
96738372
1X

1
96702337
1X

2
96702337
1X

3
96705645
2X

4
96721097
2X



Ingersoll Rand
Industrial Technologies

19

Part Number :

23463474

Title :

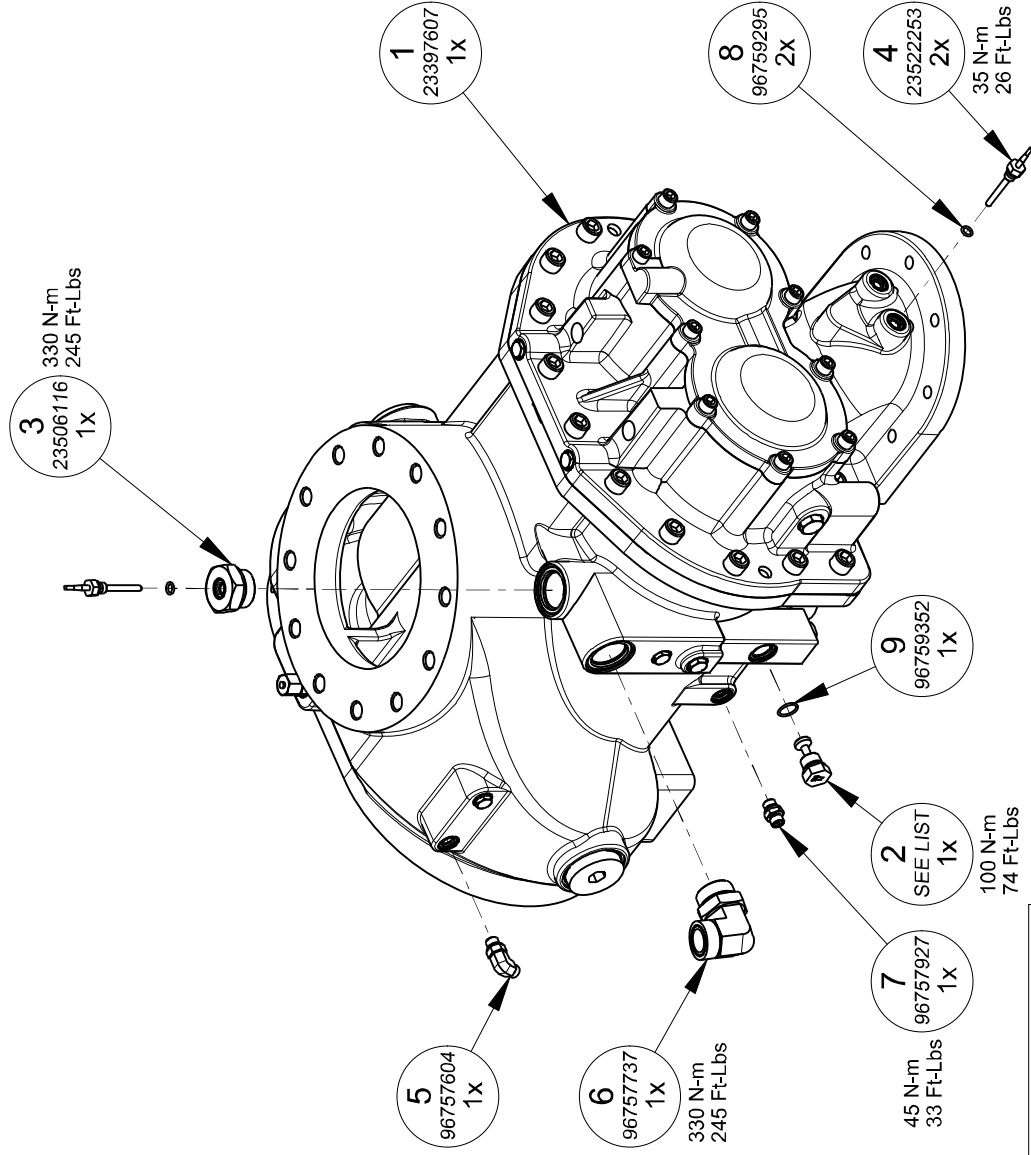
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	23397607	ASSY, AIREND WITHOUT GEARCASE	1
2	SEE LIST	ORIFICE, INJECTION	1
3	23506116	ADAPTER, M42 X M12 ISO 6149	1
4	23522253	SENSOR, TEMPERATURE THERMISTOR	2
5	96757604	ELBOW, 90 .25 TUBE X M14	1
6	96757737	ELBOW, 90 1.25 TUBE X M42	1
7	96757927	CONNECTOR .25 TUBE X M14	1
8	96759295	ORING, M12 X 1.5 9.300 ID X 2.200 WIDTH	2
9	96759352	ORING, M22 X 1.5 19.300 ID X 2.200 WIDTH	1

Description
ASSEMBLY INJECTION ORIFICE, OIL FEED FITTING AND OIL SCAVENGE FITTINGS.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
2	23436249	ORIFICE, INJ 18.5 DIA FOR R90-110U/110-145 PSIG AND 7.5-10 BARG	1
2	23436223	ORIFICE, INJ 19.5, FOR R90-110U/200 PSIG AND 14 BARG	1



Part Number : **23463474**

20

Title :

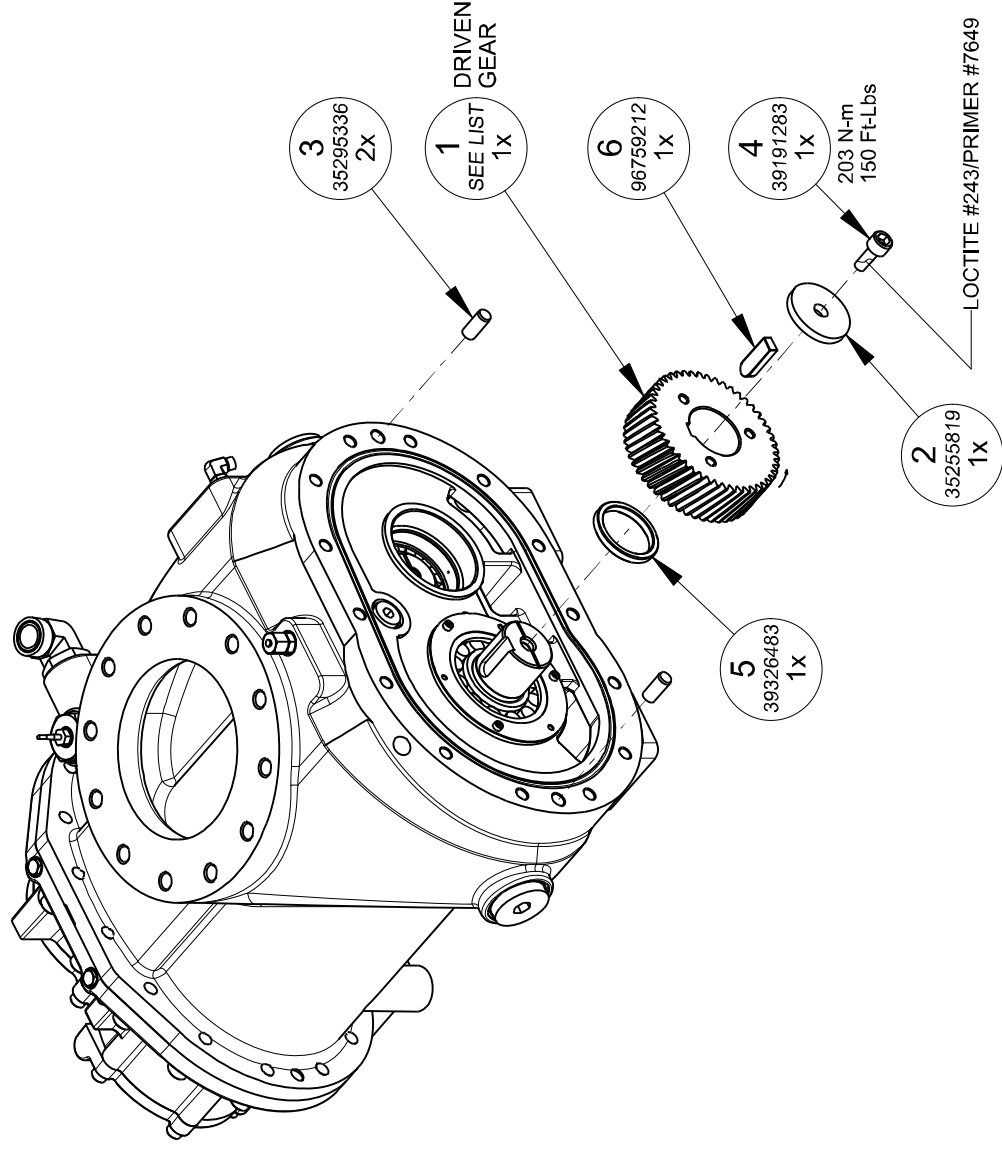
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

D

Description
ASSEMBLE GEAR SPACER, DRIVEN GEAR, CLAMP PLATE AND BOLT TO AIREND ROTOR SHAFT.

Item	Part No.	Description	Qty.
1	SEE LIST	GEAR, DRIVEN	1
2	35255819	CLAMP, PLATE	1
3	35295336	PIN, DOWEL M16 X 40	2
4	39191283	SCREW, SOCKET HEAD M16 X 35.0 LONG	1
5	39326483	SPACER, GEAR MALE ROTOR	1
6	96759212	KEY, RECT ONE ROUND END 11MM X 18MM X 55MM	1



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	23430705	GEAR SET, R90IU-110 PSIG	1
1	23430739	GEAR SET, R90IU-125 PSIG	1
1	23532591	GEAR SET, R90IU-145 PSIG	1
1	23430804	GEAR SET, R90IU-200 PSIG	1
1	23430689	GEAR SET, R90IU-7.5 BARG	1
1	23430697	GEAR SET, R90IU-8.5 BARG	1
1	23430705	GEAR SET, R90IU-10 BARG	1
1	23430770	GEAR SET, R90IU-14 BARG	1
1	23430671	GEAR SET, R110IU-110 PSIG	1
1	23430697	GEAR SET, R110IU-125 PSIG	1
1	23430853	GEAR SET, R110IU-145 PSIG	1
1	23430754	GEAR SET, R110IU-200 PSIG	1
1	23430655	GEAR SET, R110IU-7.5 BARG	1
1	23430663	GEAR SET, R110IU-8.5 BARG	1
1	23430671	GEAR SET, R110IU-10 BARG	1
1	23430705	GEAR SET, R110IU-14 BARG	1



Part Number : **23463474**

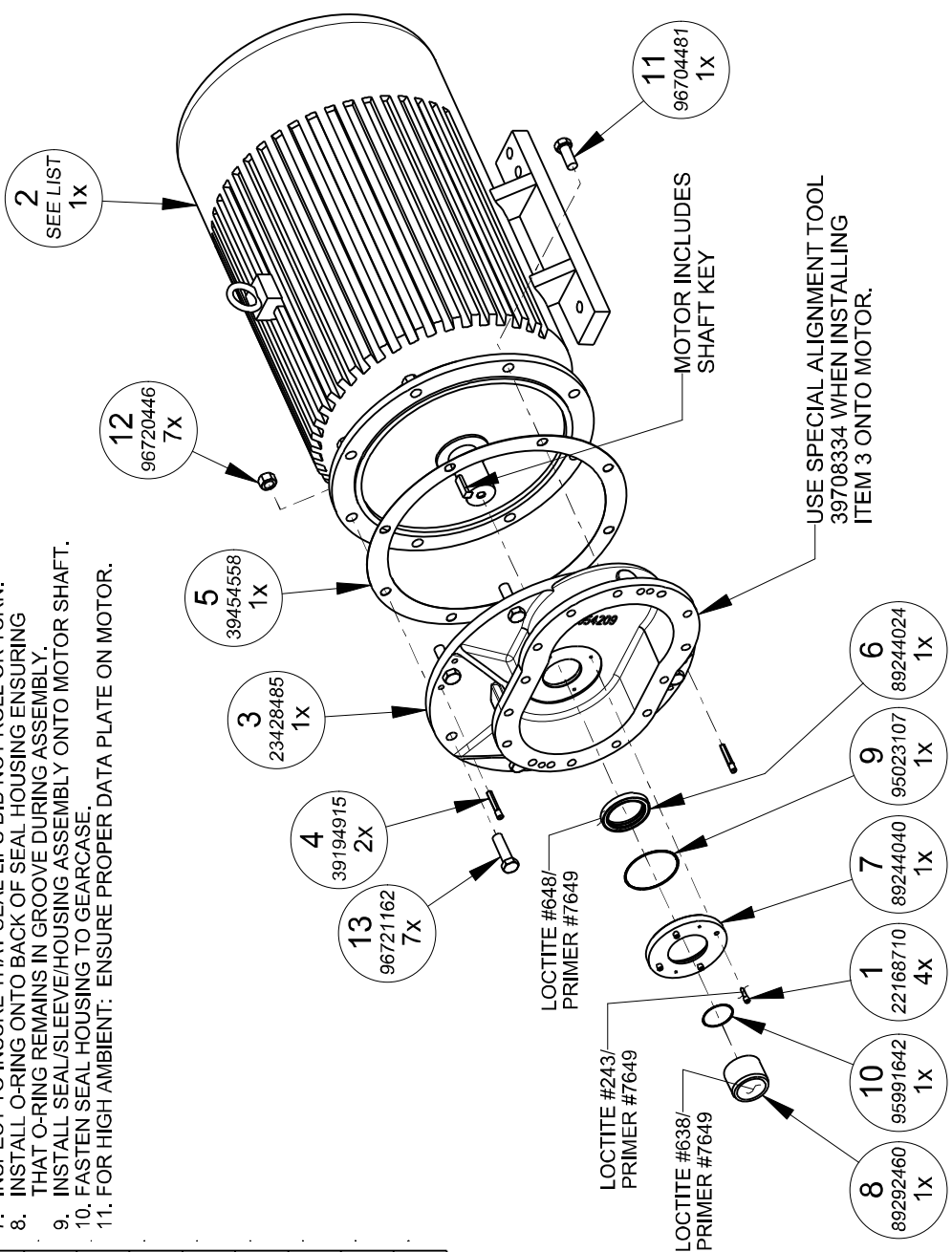
21

REV **D**
**ASSEMBLY INST., DRIVETRAIN
 (FIXED SPEED)**

Description
 ASSEMBLE GEARCASE AND SHAFT SEAL TO MOTOR.

- ASSEMBLY STEPS:**
1. INSTALL GEARCASE AND GASKET TO MOTOR.
 2. INSTALL SEAL INTO SEAL HOUSING WITH LOCTITE 648.
 3. REMOVE PROTECTIVE COVERING FROM SLEEVE AND CLEAN THOROUGHLY.
 4. LUBRICATE SEAL SLEEVE O.D. WITH ULTRACOOLANT.
 5. LUBRICATE LIPS OF SEAL I.D. WITH MOBIL SYNTHETIC GREASE.
 6. SLIDE SEAL SLEEVE THROUGH I.D. WITH SEAL LOCATED APPROXIMATELY HALF WAY ALONG SEAL SLEEVE.
 7. INSPECT TO INSURE THAT SEAL LIPS DID NOT ROLL OR TURN.
 8. INSTALL O-RING ONTO BACK OF SEAL HOUSING ENSURING THAT O-RING REMAINS IN GROOVE DURING ASSEMBLY.
 9. INSTALL SEAL/SLEEVE/HOUSING ASSEMBLY ONTO MOTOR SHAFT.
 10. FASTEN SEAL HOUSING TO GEARCASE.
 11. FOR HIGH AMBIENT: ENSURE PROPER DATA PLATE ON MOTOR.

Item	Part No.	Description	Qty.
1	22168710	CAP SCREW, SOCKET HEAD WITH NYLON INSERT	4
2	SEE LIST	MOTOR, DRIVE	1
3	23428485	HSG, GEARCASE, 226mm 125-200 HP (90-110kW), MACH	1
4	39194915	PIN, DOWEL	2
5	39454558	GASKET - GEAR CASE TO MOTOR	1
6	89244024	SEAL, SHAFT HIGH PRESSURE	1
7	89244040	SEAL HOUSING	1
8	89292460	SLEEVE, SHAFT	1
9	95023107	ORING, STANDARD -156 4.250 ID X .094 WIDTH	1
10	95991642	ORING, STANDARD -036 2.375 ID X .062 WIDTH	1
11	96704481	SCREW, HEX HEAD M20-2.50 X 50.0 LONG	1
12	96720446	NUT, HEX STYLE 1 COURSE THD M20-2.50	7
13	96721162	SCREW, HEX HEAD M20-2.50 X 70.0 LONG	7



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
2	23414295	MOTOR, DRIVE, 90KW 400V 50HZ TEFC (IE3)	1
2	23441694	MOTOR, DRIVE, 90KW 400V 50HZ TEFC (IE1)	1
2	23414303	MOTOR, DRIVE, 110KW 400V 50HZ TEFC (IE3)	1
2	23441702	MOTOR, DRIVE, 110KW 400V 50HZ TEFC (IE1)	1
2	23414337	MOTOR, DRIVE, 125HP 380V 60HZ TEFC (IE3)	1
2	23414345	MOTOR, DRIVE, 125HP 440V 60HZ TEFC (IE3)	1
2	23434772	MOTOR, DRIVE, 125HP 460V 60HZ TEFC (IE3)	1
2	23422249	MOTOR, DRIVE, 125HP 575V 60HZ TEFC (IE3)	1
2	23414360	MOTOR, DRIVE, 150HP 380V 60HZ TEFC (IE3)	1
2	23414378	MOTOR, DRIVE, 150HP 440V 60HZ TEFC (IE3)	1
2	23434780	MOTOR, DRIVE, 150HP 460V 60HZ TEFC (IE3)	1
2	23422256	MOTOR, DRIVE, 150HP 575V 60HZ TEFC (IE3)	1



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Part Number : **23463474**

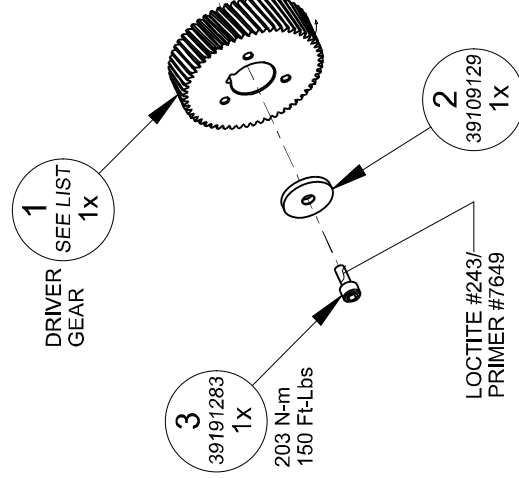
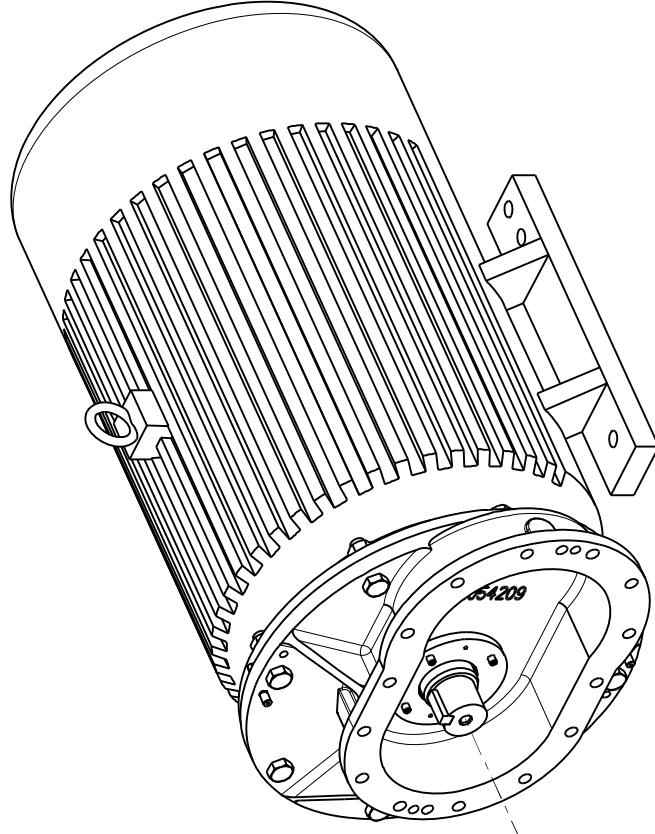
Title : **ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV **D**

22

Item	Part No.	Description	Qty.
1	SEE LIST	GEAR, DRIVER	1
2	39109129	PLATE, RETAINER	1
3	39191283	SCREW, SOCKET HEAD M16 X 35.0 LONG	1

Description
ASSEMBLE DRIVER GEAR TO MOTOR.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	23430705	GEAR SET, R90IU-110 PSIG	1
1	23430739	GEAR SET, R90IU-125 PSIG	1
1	23532591	GEAR SET, R90IU-145 PSIG	1
1	23430804	GEAR SET, R90IU-200 PSIG	1
1	23430689	GEAR SET, R90IU-7.5 BARG	1
1	23430697	GEAR SET, R90IU-8.5 BARG	1
1	23430705	GEAR SET, R90IU-10 BARG	1
1	23430770	GEAR SET, R90IU-14 BARG	1
1	23430671	GEAR SET, R110IU-110 PSIG	1
1	23430697	GEAR SET, R110IU-125 PSIG	1
1	23430853	GEAR SET, R110IU-145 PSIG	1
1	23430754	GEAR SET, R110IU-200 PSIG	1
1	23430655	GEAR SET, R110IU-7.5 BARG	1
1	23430663	GEAR SET, R110IU-8.5 BARG	1
1	23430671	GEAR SET, R110IU-10 BARG	1
1	23430705	GEAR SET, R110IU-14 BARG	1



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23

Part Number :

23463474

Title :

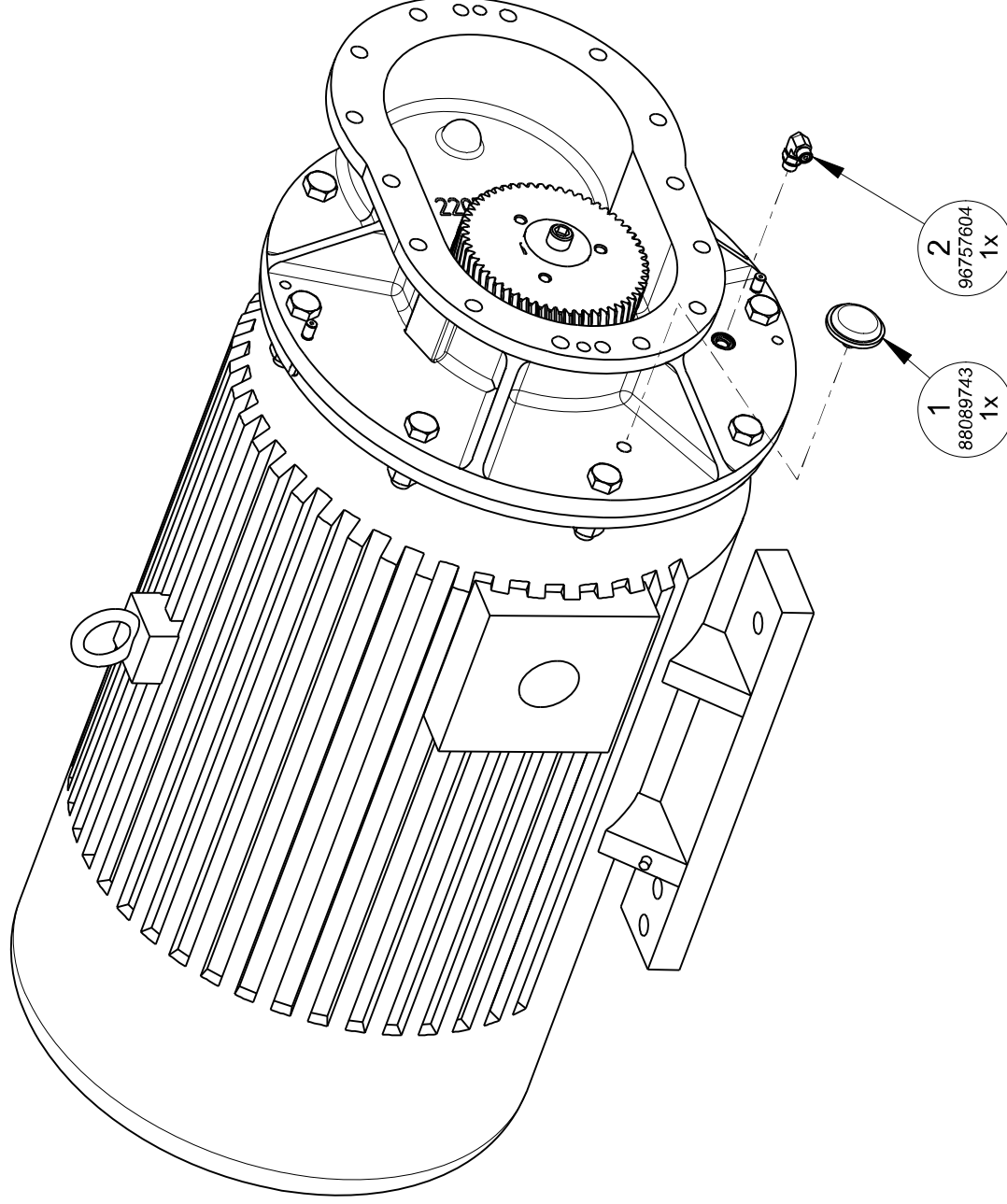
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	88089743	BREATHER, FILTER .25 INCH BSPT	1
2	96757604	ELBOW, 90 .25 TUBE X M14	1

Description
ASSEMBLE BREATHER AND SCAVENGE FITING TO GEAR CASE.



- 1
88089743
1X
- 2
96757604
1X

45 N-m
33 Ft-Lbs



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Industrial Technologies

Part Number : **23463474**

24

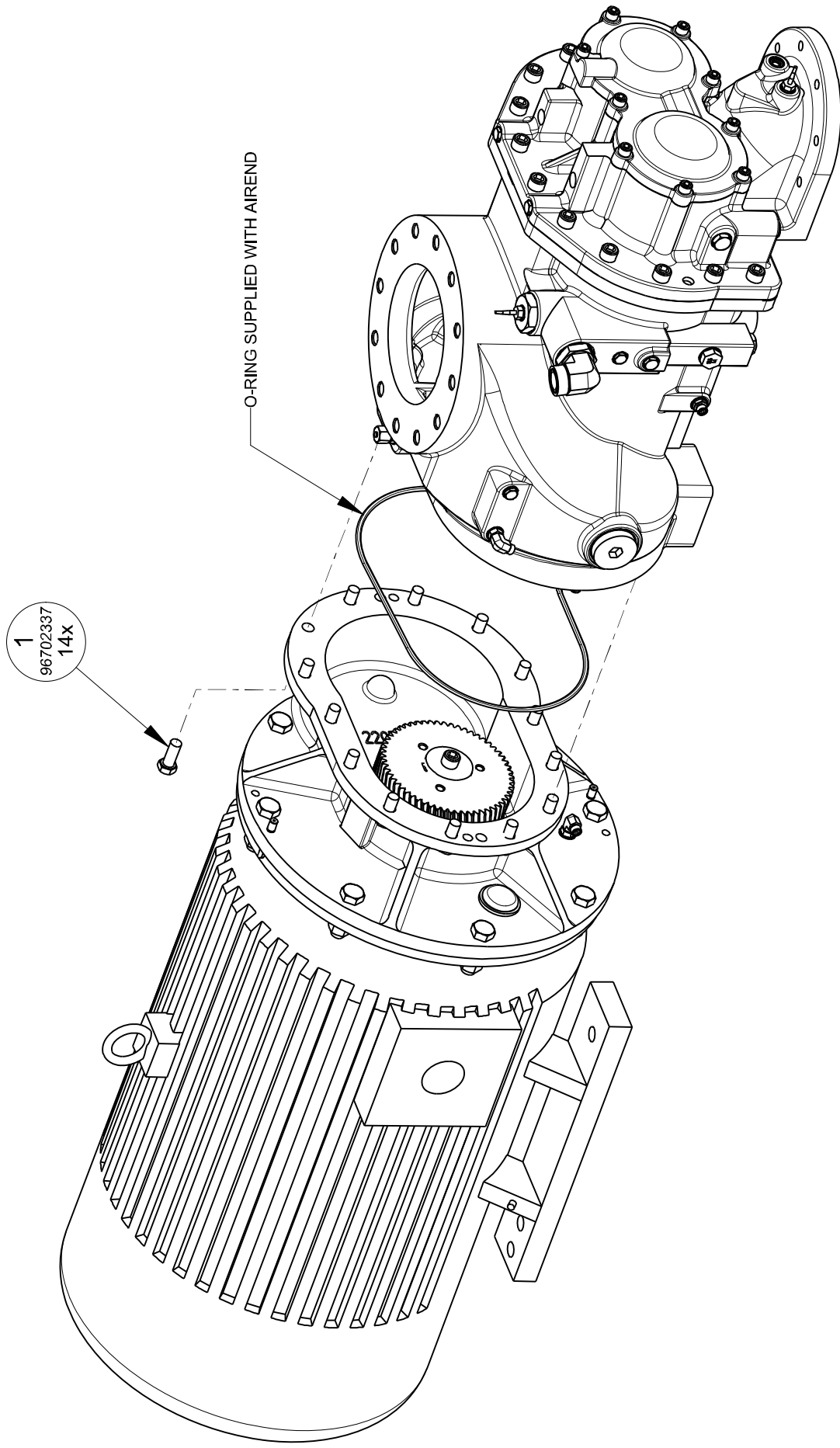
Part Number :

Title :

**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV **D**

Item	Part No.	Description	Qty.	Description
1	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	14	ASSEMBLE AIREND TO MOTOR.





Part Number : **23463474**

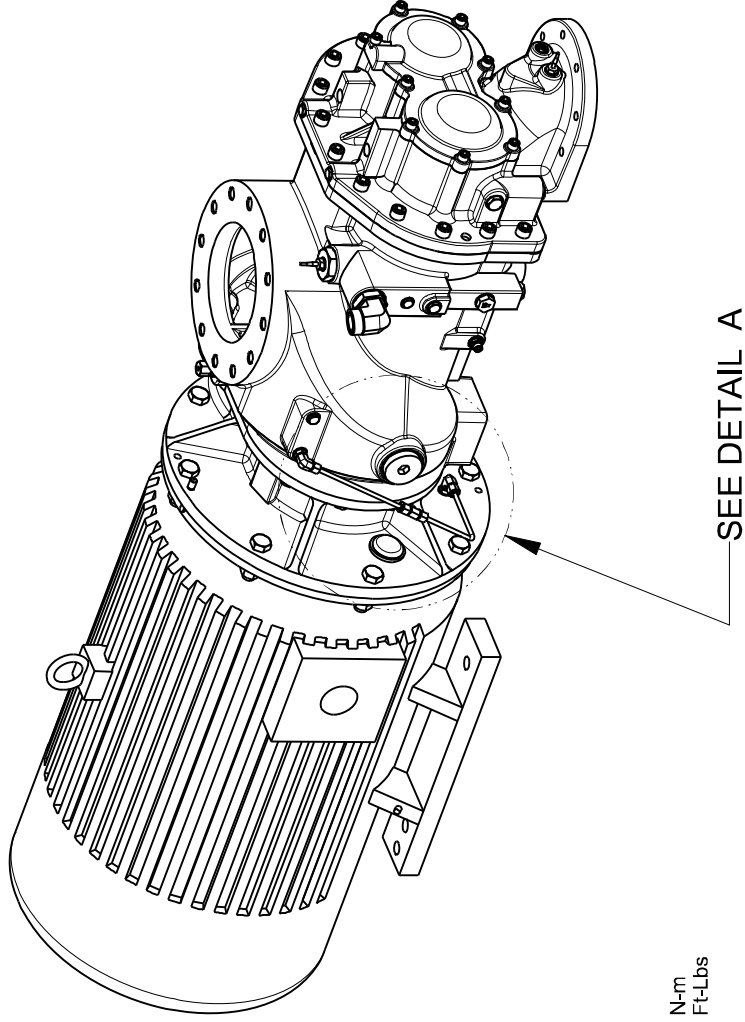
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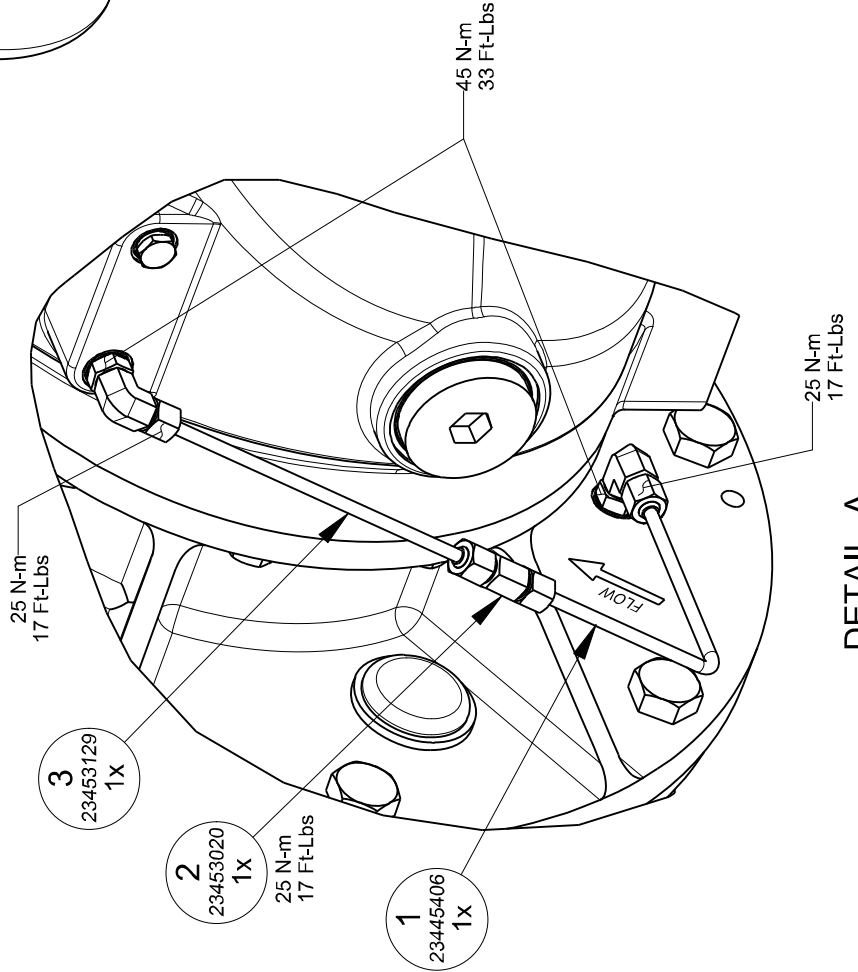
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV **D**

Item	Part No.	Description	Qty.	Description
1	23445406	TUBE, GEARCASE SCAVENGE	1	ASSEMBLE GEARCASE SCAVENGE LINE AND CHECK VALVE.
2	23453020	VALVE, IN-LINE CHECK (-4 ORFS MALE X -4 ORFS MALE)	1	
3	23453129	TUBE, GEARCASE SCAVENGE	1	



SEE DETAIL A



**DETAIL A
SCALE 0.280**



Part Number : 23463474

Title :

ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)

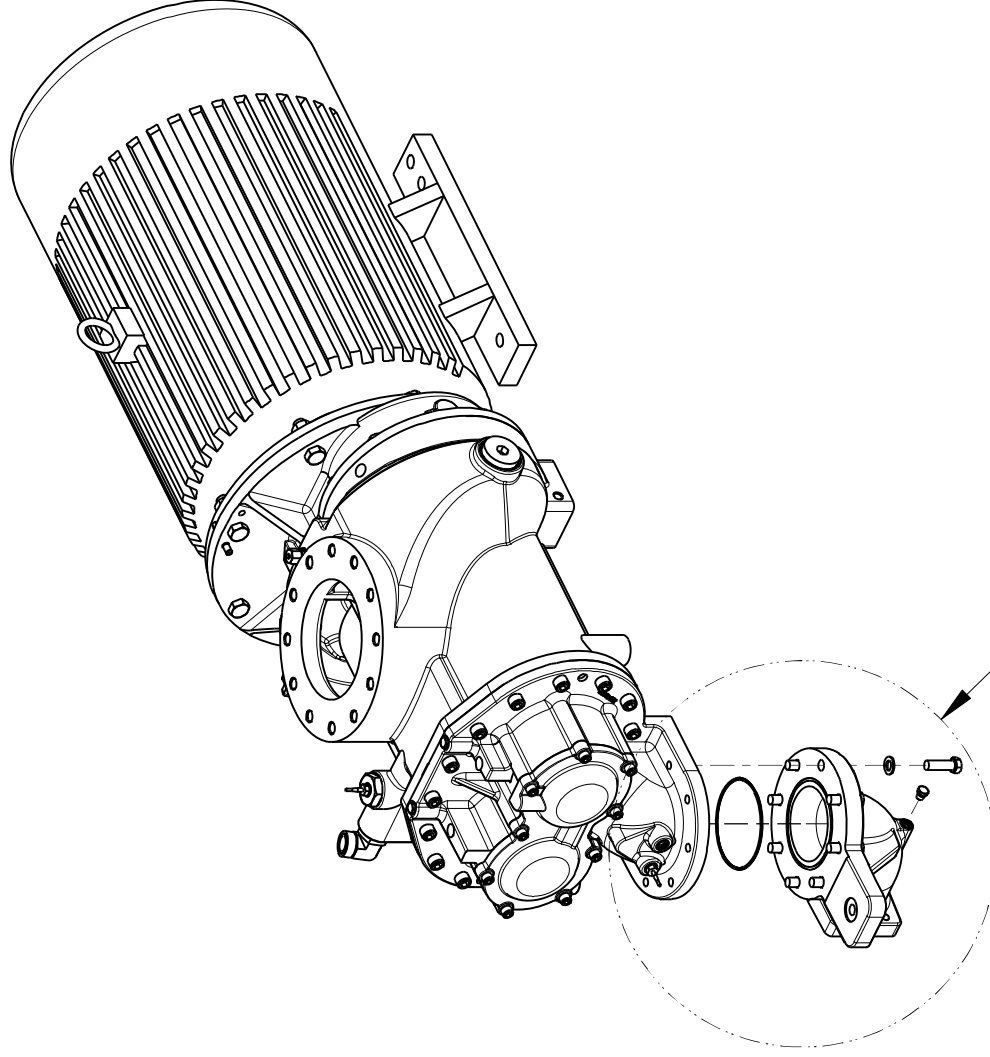
REV

D

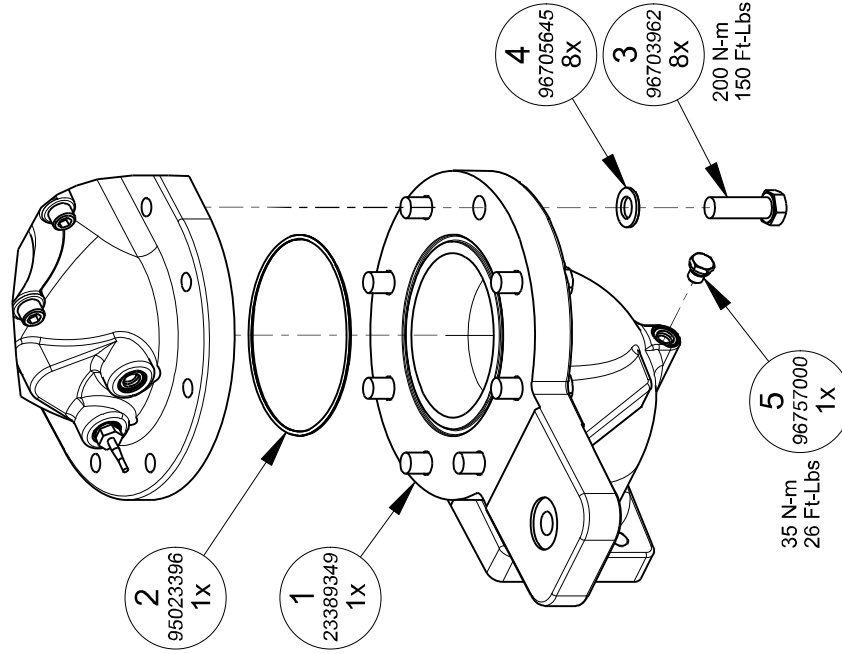
26

Item	Part No.	Description	Qty.
1	23389349	ELBOW, DISCHARGE 226 AIREND (MACH)	1
2	95023396	ORING, STANDARD -256 5.750 ID X .125 WIDTH	1
3	96703962	SCREW, HEX HEAD M16-2.00 X 50.0 LONG	8
4	96705645	WASHER, PRODUCT GRADE A M16	8
5	96757000	PLUG, HEX HEAD M12	1

Description
ASSEMBLE DISCHARGE ELBOW.



SEE DETAIL B



DETAIL B
SCALE 0.175



Part Number : 23463474

27

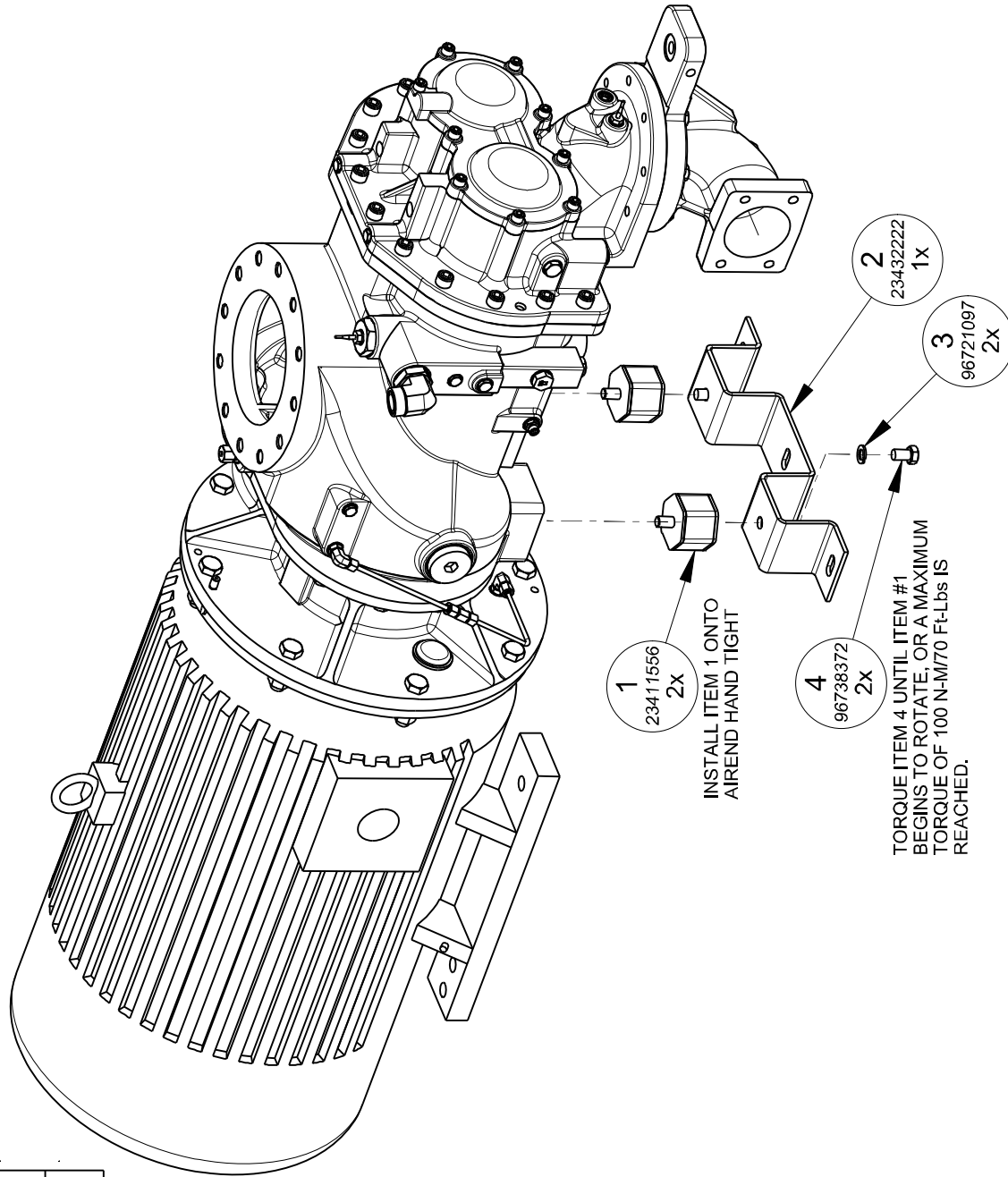
Title :

ASSEMBLY INST., DRIVETRAIN (FIXED SPEED)

REV **D**

Item	Part No.	Description	Qty.
1	23411556	MOUNT, ISOLATION DUROMETER 75	2
2	23432222	SUPPORT, VSD DRIVETRAIN	1
3	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
4	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	2

Description
ASSEMBLE ISOLATION MOUNTS.





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Industrial Technologies

Part Number : **23463474**

28

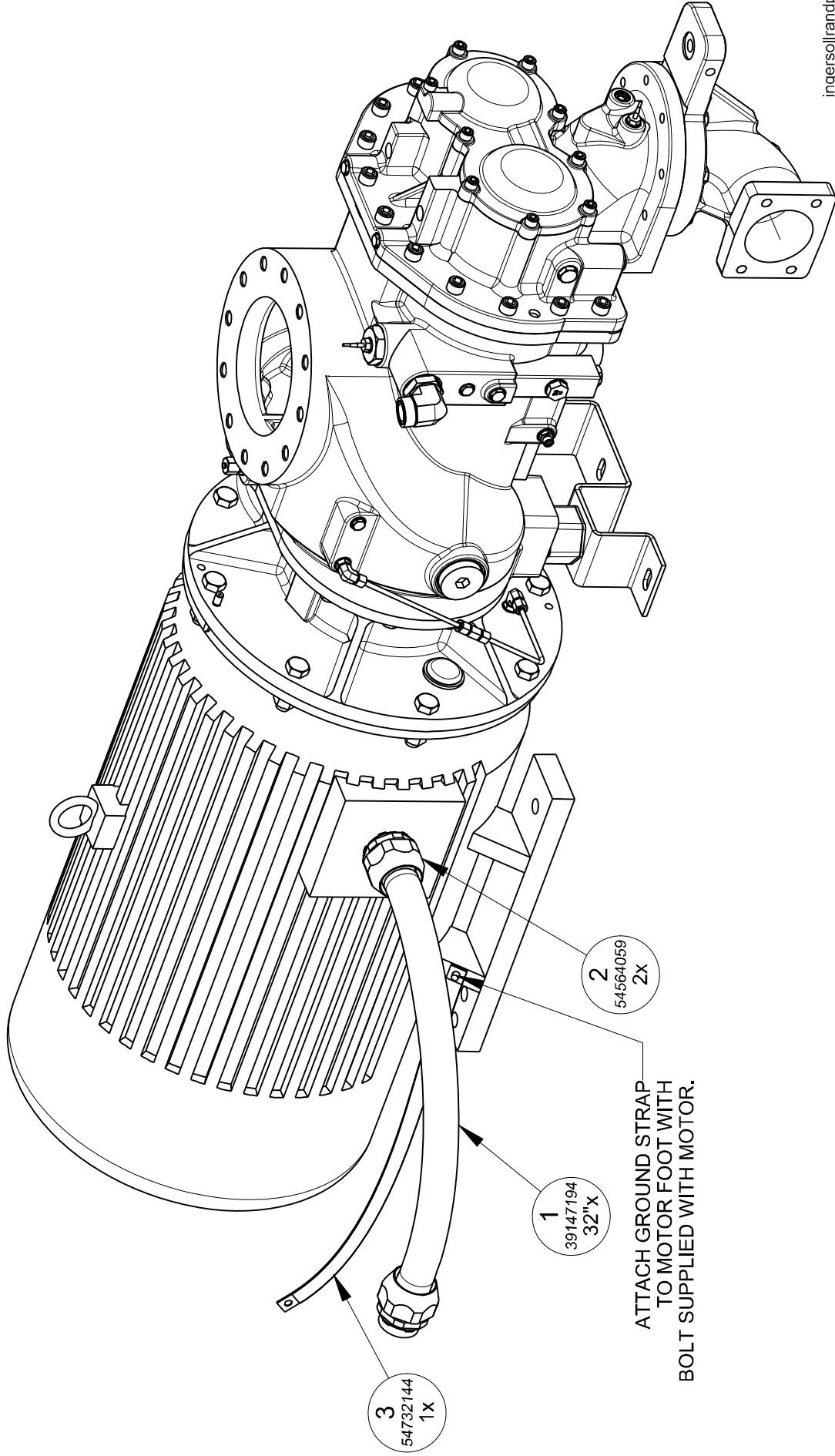
Title :

**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

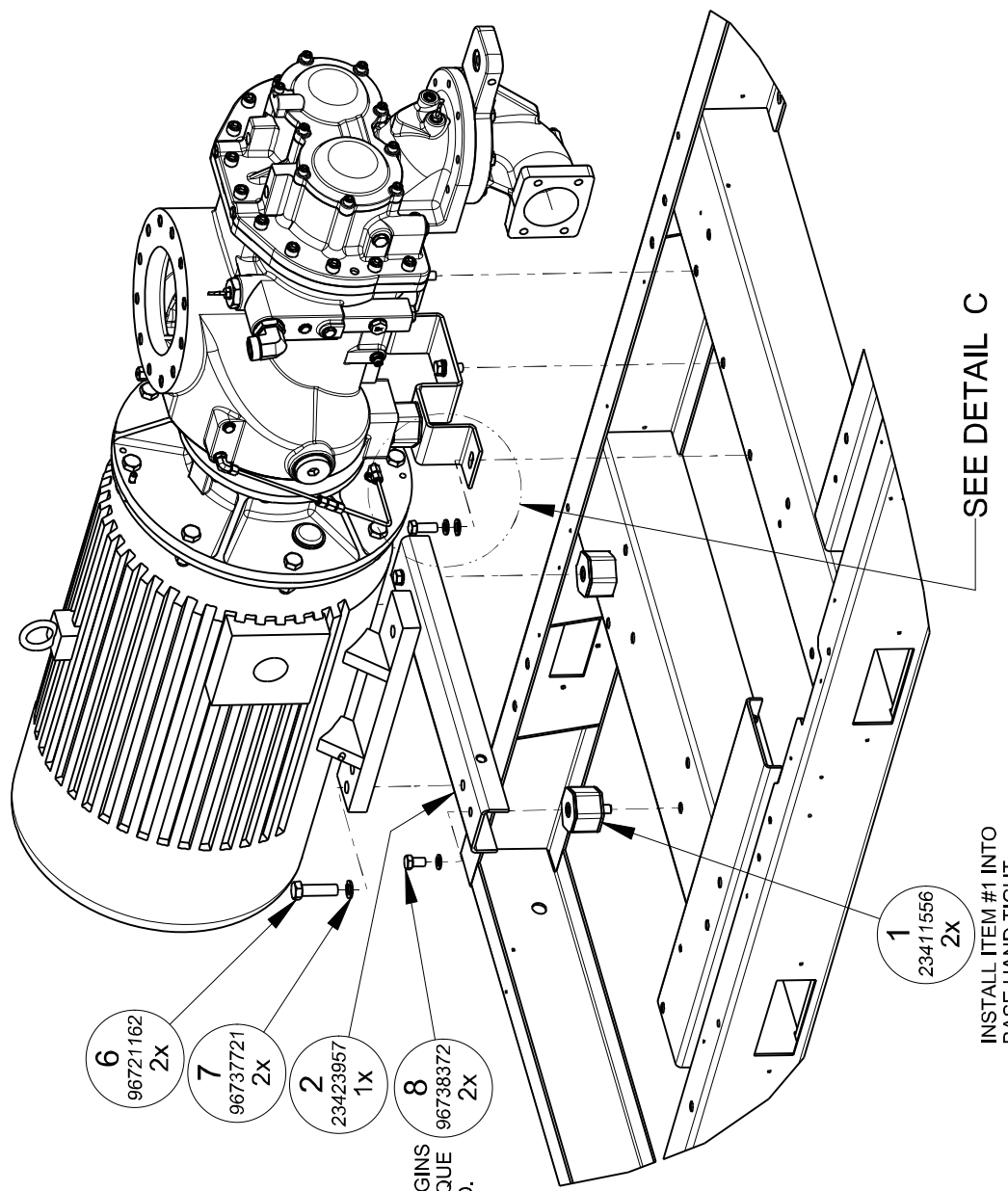
D

Item	Part No.	Description	Qty.	Description
1	39147194	CONDUIT, FLEXIBLE PVC TUBING BLACK 2" DIAMETER	32"	ASSEMBLE GROUND STRAP AND CONDUIT.
2	54564059	CONNECTOR, 2.00" CONDUIT NEMA 1 & 4 NONMETALLIC	2	
3	54732144	STRAP, EARTH GROUND 900MM LONG	1	

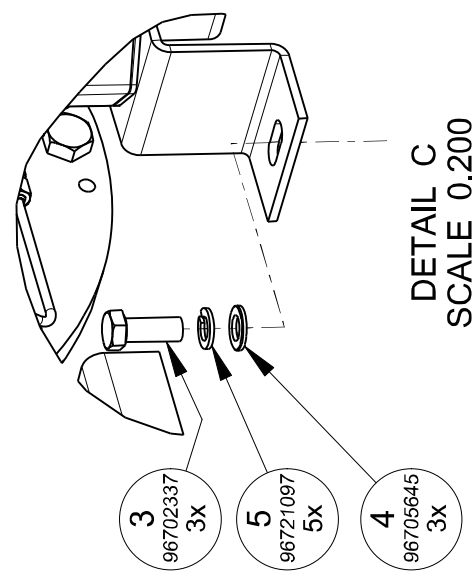


Item	Part No.	Description	Qty.
1	23411556	MOUNT, ISOLATION DUROMETER 75	2
2	23423957	MOUNT, MOTOR (FIXED SPEED)	1
3	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	3
4	96705645	WASHER, PRODUCT GRADE A M16	3
5	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	5
6	96721162	SCREW, HEX HEAD M20-2.50 X 70.0 LONG	2
7	96737721	WASHER, SPRING LOCK, CURVED TYPE A, M20	2
8	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	2

Description
ASSEMBLE MOTOR MOUNTS AND MOUNT TO BASE. SET DRIVETRAIN IN PLACE AND SECURE TO BASE.



TORQUE ITEM 8 UNTIL ITEM 1 BEGINS TO ROTATE OR A MAXIMUM TORQUE OF 100 N-M/70 Ft-Lbs IS REACHED.



INSTALL ITEM #1 INTO BASE HAND TIGHT

SEE DETAIL C



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Industrial Technologies

Part Number : **23463474**

30

Title :

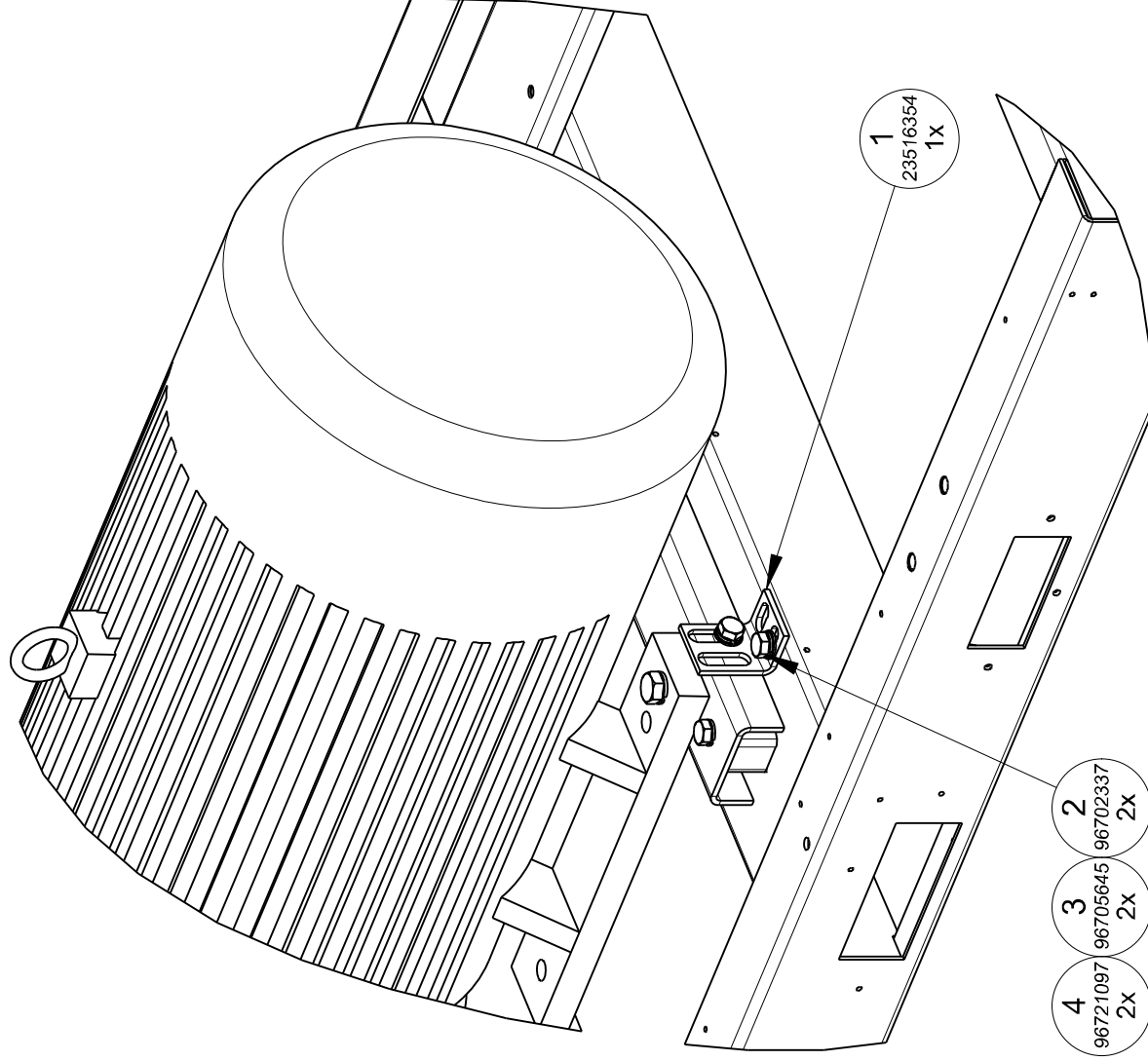
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	23516354	BRACE, AIREND SHIPPING AT DISCHARGE ELOW	1
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	2
3	96705645	WASHER, PRODUCT GRADE A M16	2
4	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2

Description
ASSEMBLE MOTOR SHIPPING BRACE.



- 1 23516354 1X
- 2 96705645 2X
- 3 96705645 2X
- 4 96721097 2X



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Industrial Technologies

31

Part Number :

23463474

Title :

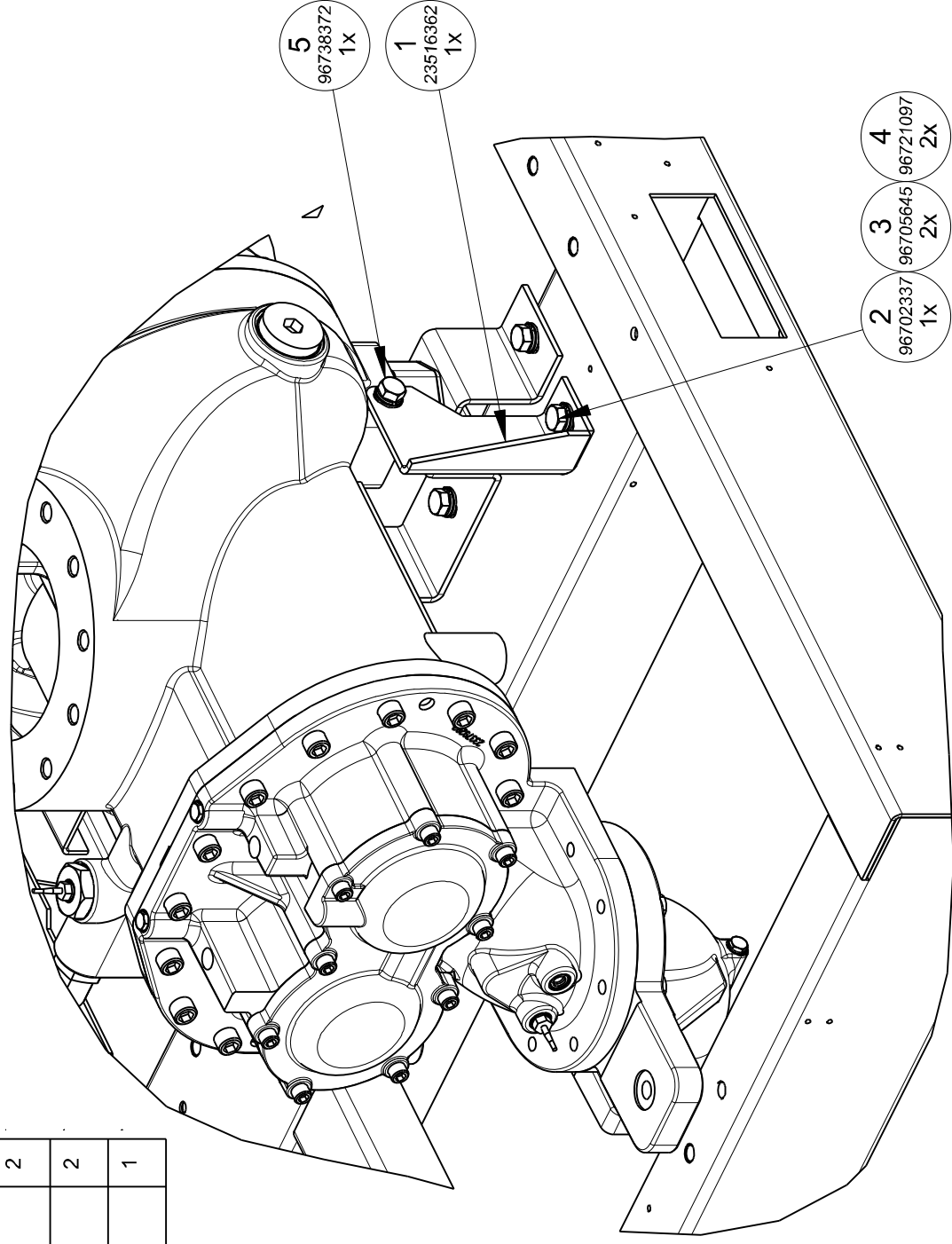
**ASSEMBLY INST., DRIVETRAIN
(FIXED SPEED)**

REV

D

Item	Part No.	Description	Qty.
1	23516362	BRACE, AIREND SHIPPING	1
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	1
3	96705645	WASHER, PRODUCT GRADE A M16	2
4	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
5	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	1

Description
ASSEMBLY AIREND SHIPPING BRACE.



- 2 96702337 1X
- 3 96705645 2X
- 4 96721097 2X



32

Part Number :

23464092

Title :

ASSEMBLY INST.,
SEPARATOR TANK

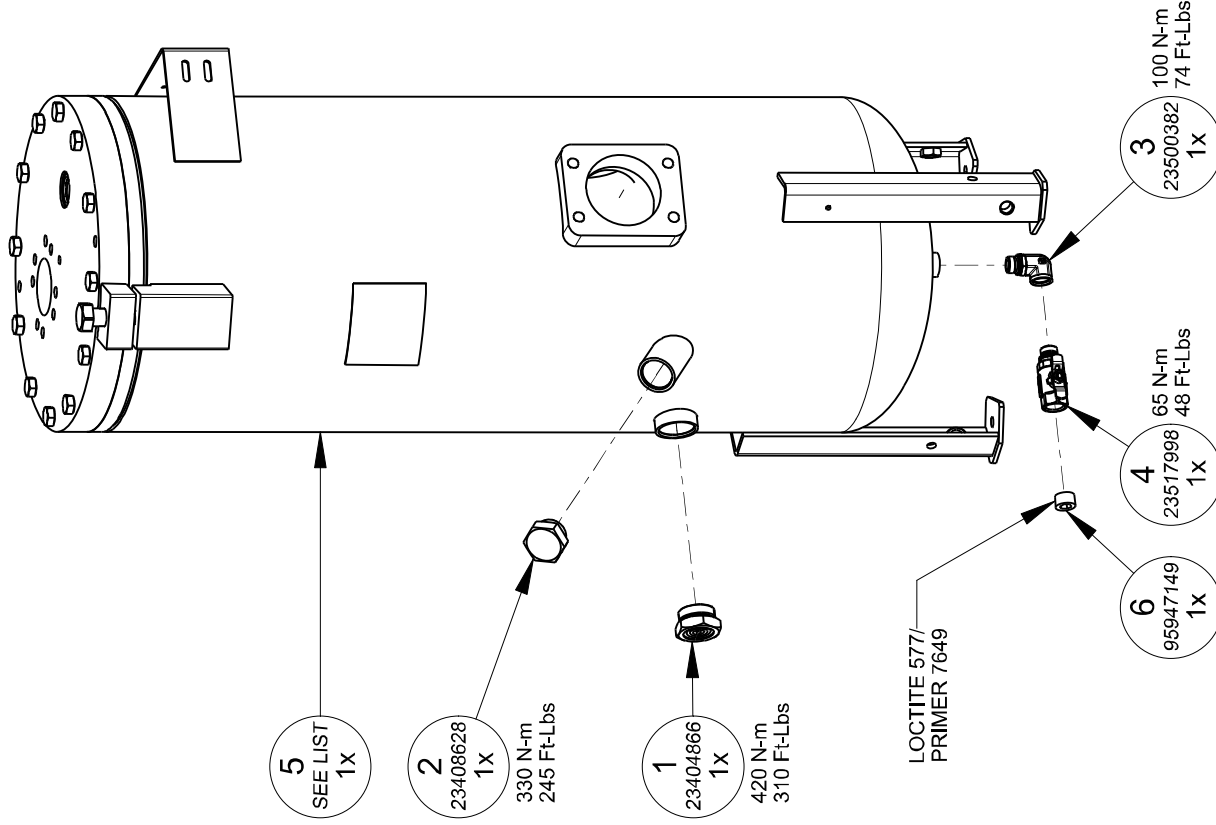
REV

D

Qty.

Item	Part No.	Description	Qty.
1	23404866	ASSEMBLY, SIGHT GLASS	1
2	23408628	PLUG, OIL FILL ULTRA COOLANT	1
3	23500382	ELBOW 90 STREET, M22 x 1.5 ISO 6149	1
4	23517998	VALVE, BALL	1
5	SEE LIST	TANK, SEPARATOR 446mm FABRICATED	1
6	95947149	PLUG, SOCKET .75 NPT	1

Description
ASSEMBLE SIGHT GLASS, FILL PLUG AND DRAIN FITTINGS.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
3	23555907	TANK, SEPARATOR (ASME, CRN, NR-13)
3	23558315	TANK, SEPARATOR (GB-150)
3	23558323	TANK, SEPARATOR (TUV)
3	23558331	TANK, SEPARATOR (CE)
3	23558349	TANK, SEPARATOR (ASME PACIFIC RIM)
3	23558356	TANK, SEPARATOR (AS1210)



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33

Part Number :

23464092

Title :

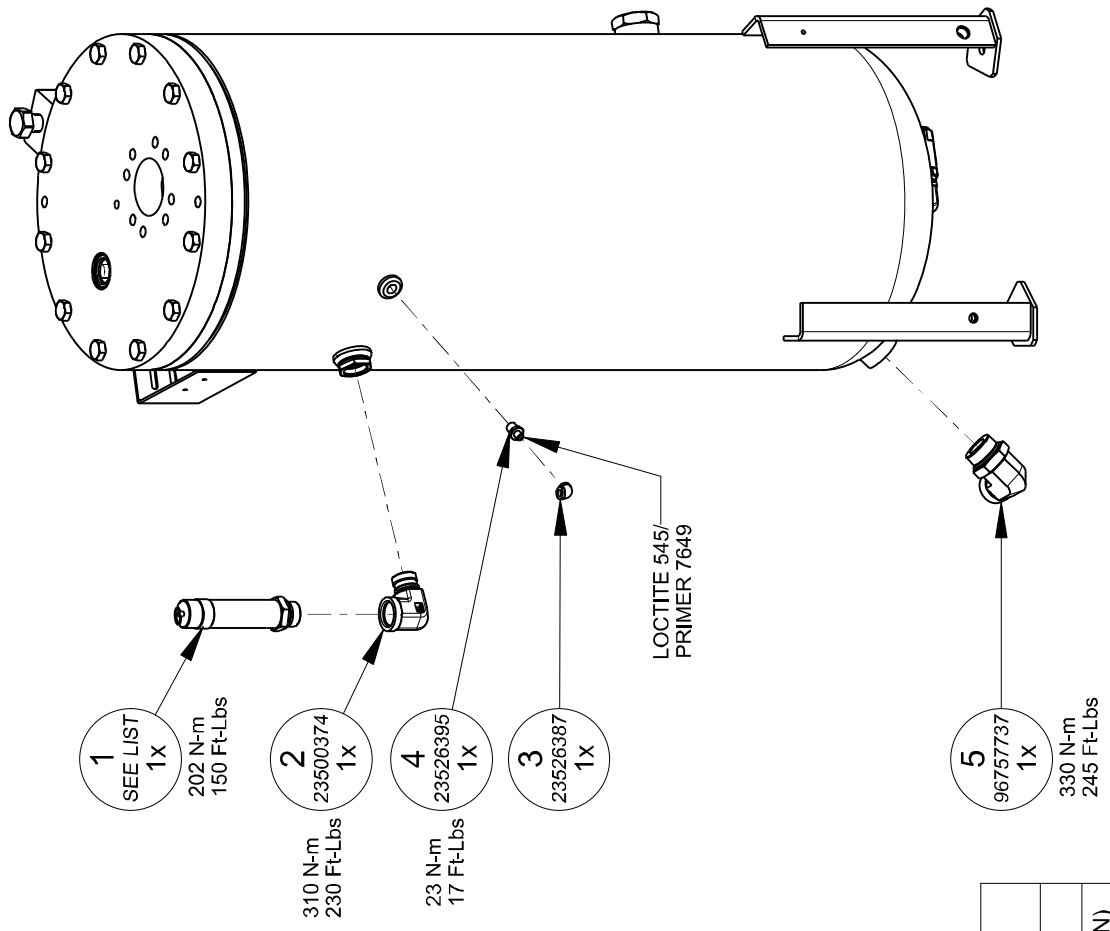
**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

Description
ASSEMBLE SAFETY VALVE, SYNIFLEX ELBOW AND OIL SUMP ELBOW.

Item	Part No.	Description	Qty.
1	SEE LIST	VALVE, PRESSURE RELIEF	1
2	23500374	ELBOW, 90 STREET, M33 X 2 ISO 6149	1
3	23526387	ELBOW, 90 DEG FEMALE 1/8" BSPT	1
4	23526395	ADAPTOR, 1/4" BSPP X 1/8" BSPT	1
5	96757737	ELBOW, 90 1.25 TUBE X M42	1



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	23443674	VALVE, PRESSURE RELIEF 16 BAR (ASME & CRN)
1	23443666	VALVE, PRESSURE RELIEF 16 BAR (CE)
1	23443690	VALVE, PRESSURE RELIEF 16 BAR (GB)



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Part Number :

23464092

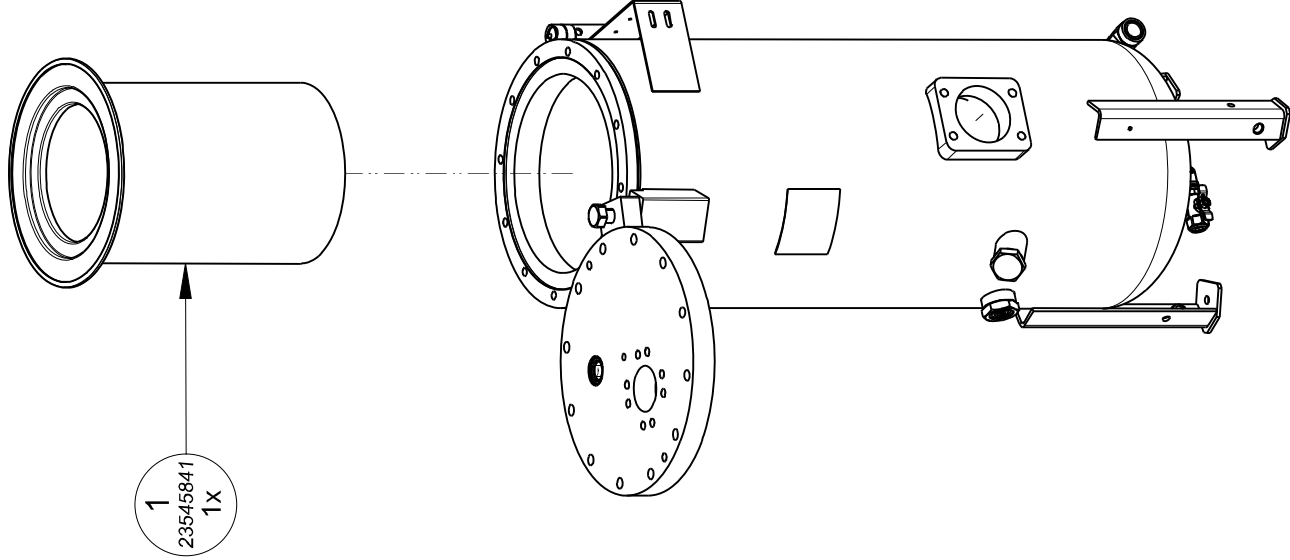
Title :

**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

Item	Part No.	Description	Qty.	Description
1	23545841	ELEMENT, SEPARATOR TANK 18 INCH	1	ASSEMBLE FILTER.



1
23545841
1X



Part Number : 23464092

ASSEMBLY INST., SEPARATOR TANK

REV **D**

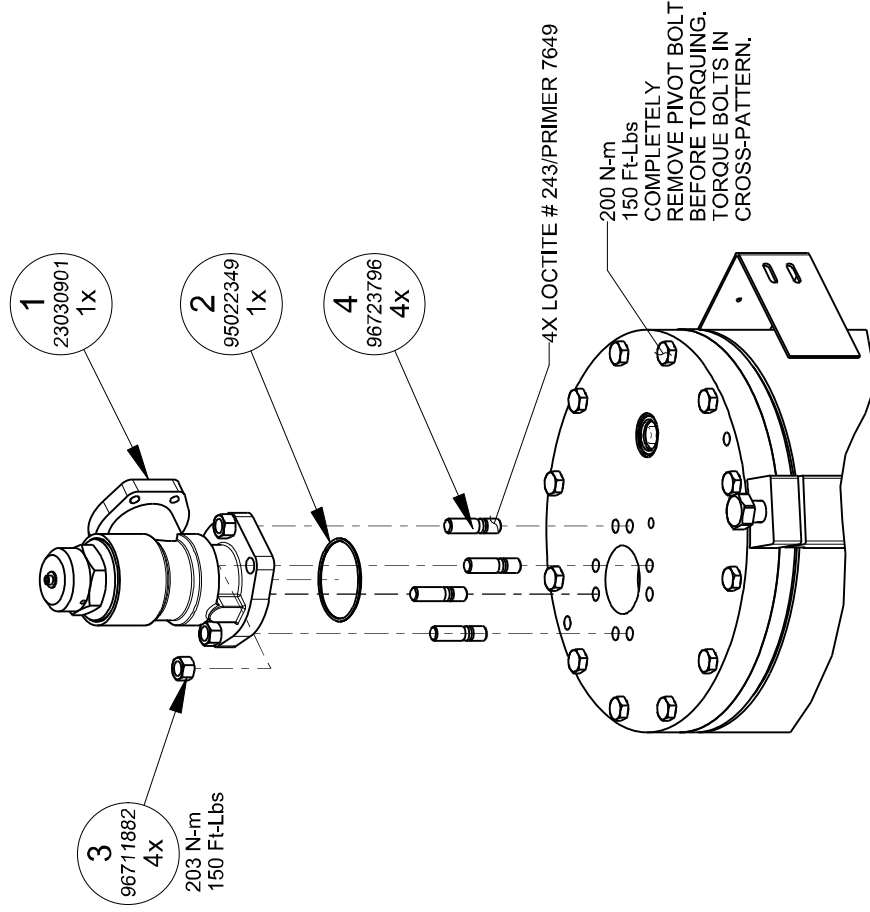
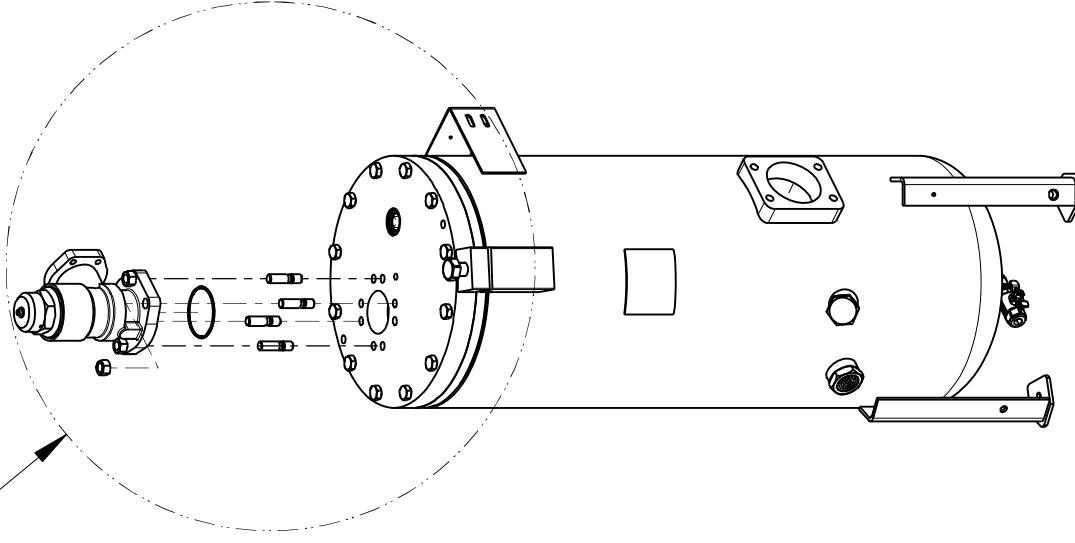
35

Title :

Description
ASSEMBLE MPCV.

Item	Part No.	Description	Qty.
1	23030901	VALVE, MPC-H42X-16L DN65 SAE FLANGES 2.5 OUT 3.0 IN	1
2	95022349	ORING, STANDARD -237 3.375 ID X .125 WIDTH	1
3	96711882	NUT, HEX STYLE 1 COURSE THD M16-2.00	4
4	96723796	STUD, PLAIN M16-2.0 X 45 LG	4

SEE DETAIL A



DETAIL A
SCALE 0.120



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Part Number :

23464092

Title :

**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

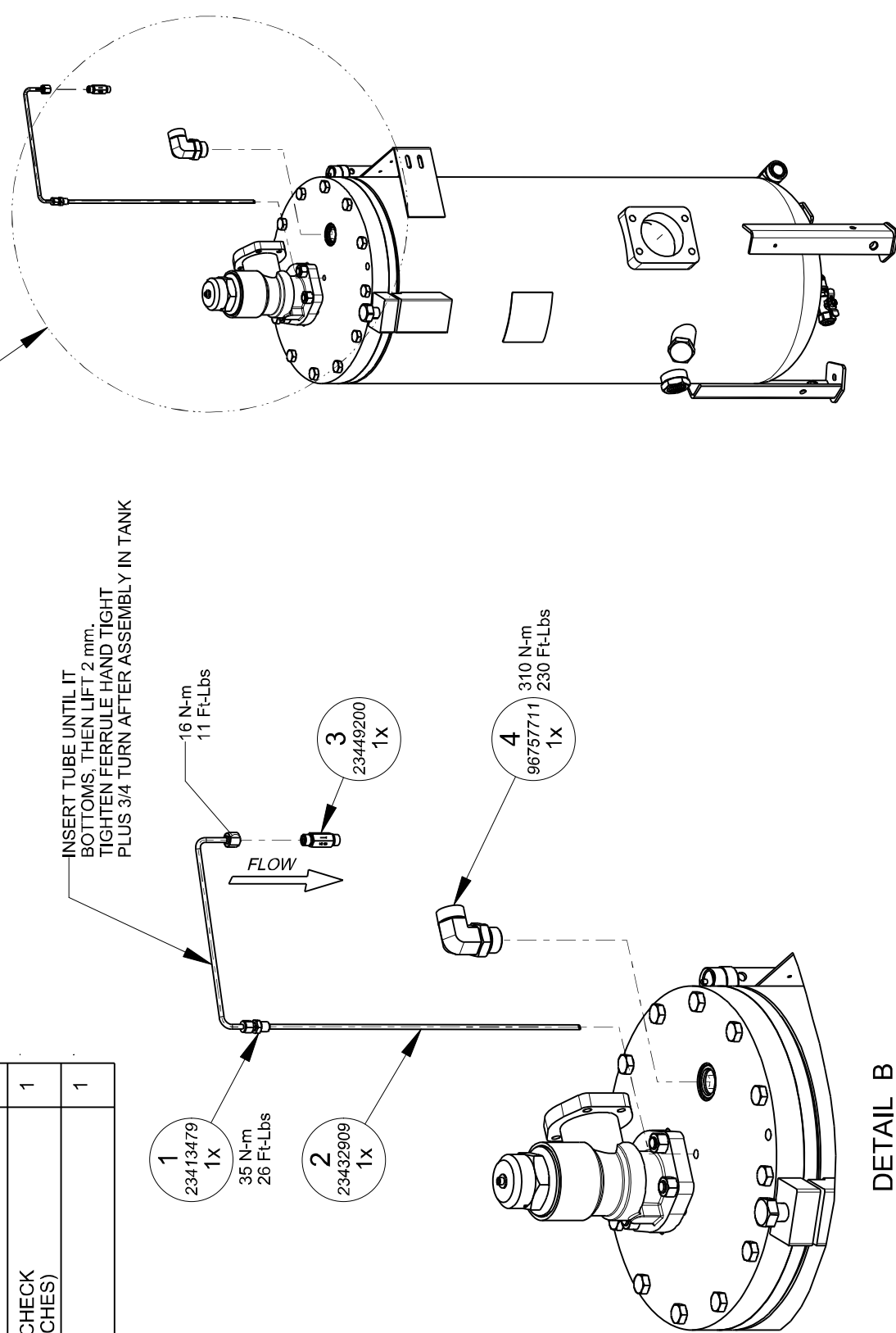
Item	Part No.	Description	Qty.
1	23413479	ADAPTER, THERMO-COUPLE (.25 INCH BSPP X .25 INCH TUBE)	1
2	23432909	TUBE, SCAVENGE .25 OD	1
3	23449200	VALVE, ORIFICE/CHECK (1.78 mm / .070 INCHES)	1
4	96757711	ELBOW, 90 1.0 TUBE X M33	1

Description

ASSEMBLE SCAVENGE TUBE AND BLOW DOWN FITTING.

SEE DETAIL B

INSERT TUBE UNTIL IT
BOTTOMS, THEN LIFT 2 mm.
TIGHTEN FERRULE HAND TIGHT
PLUS 3/4 TURN AFTER ASSEMBLY IN TANK



DETAIL B
SCALE 0.125



Part Number : **23464092**

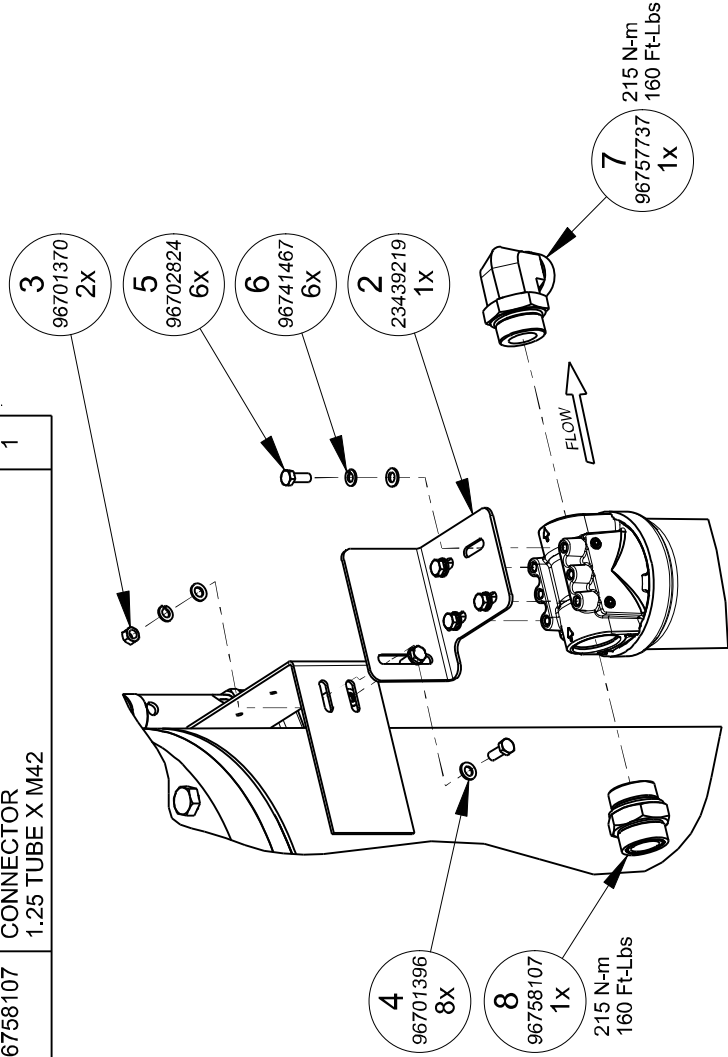
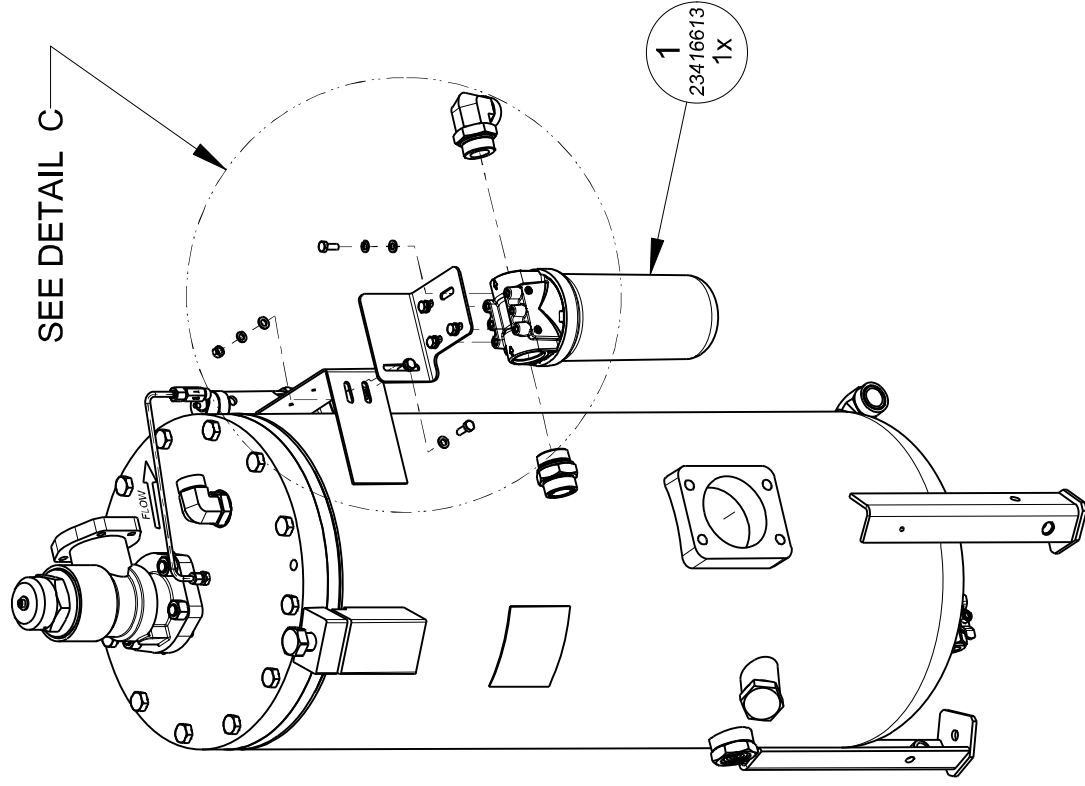
37

**ASSEMBLY INST.,
SEPARATOR TANK**

Title :

REV **D**

Item	Part No.	Description	Qty.	Description
1	23416613	FILTER, COOLANT M42 X 2 CORELESS SPIN-ON	1	ASSEMBLE OIL FILTER AND BRACKET.
2	23439219	SUPPORT, OIL FILTER	1	
3	96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25	2	
4	96701396	WASHER, PLAIN GRADE C, 8	8	
5	96702824	SCREW, HEX HEAD M8-1.25 X 20.0 LONG	6	
6	96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8	6	
7	96757737	ELBOW, 90 1.25 TUBE X M42	1	
8	96758107	CONNECTOR 1.25 TUBE X M42	1	



DETAIL C
SCALE 0.150



Part Number : **23464092**

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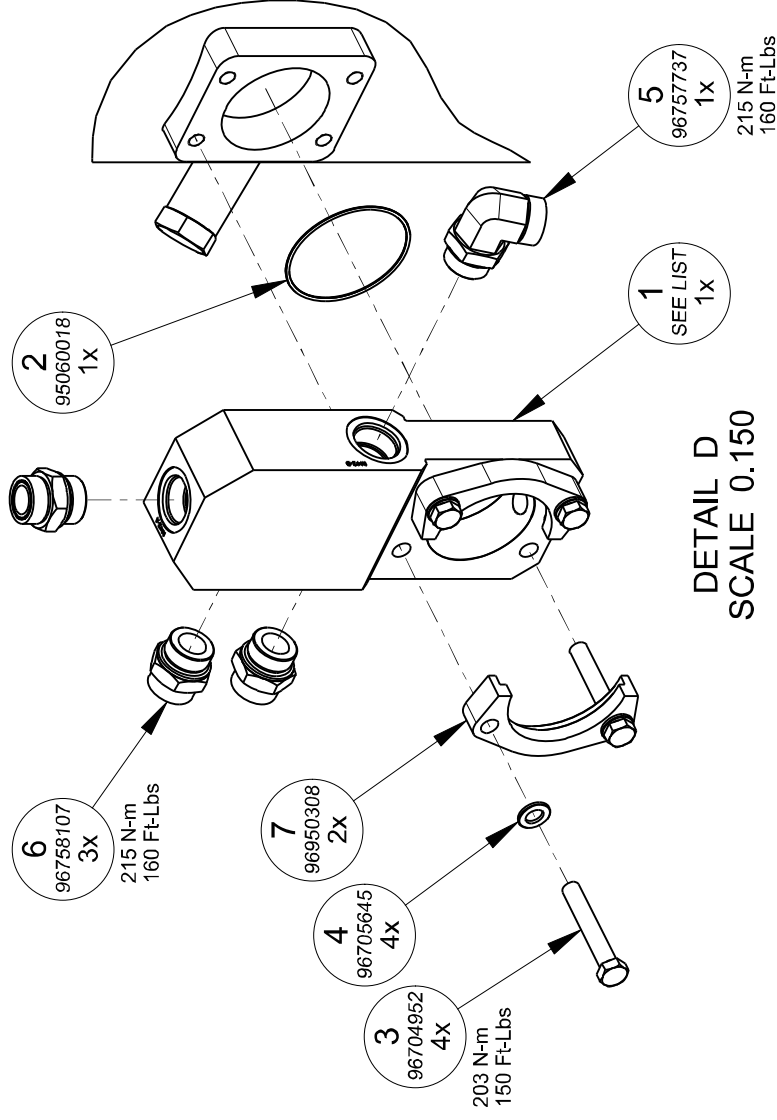
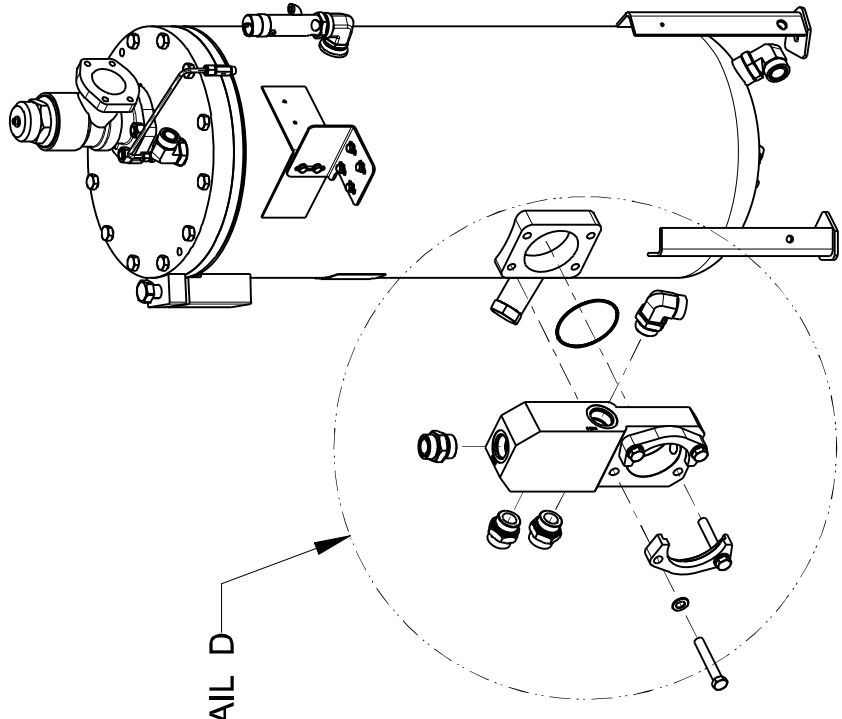
**ASSEMBLY INST.,
SEPARATOR TANK**

REV **D**

Description
ASSEMBLE HSTV AND FITTINGS.

Item	Part No.	Description	Qty.
1	SEE LIST	VALVE, ASSEMBLY HS THERMAL	1
2	95060018	ORING, STANDARD -245 4.375 ID X .125 WIDTH	1
3	96704952	SCREW, HEX HEAD M16-2.00 X 100.0 LONG	4
4	96705645	WASHER, PRODUCT GRADE A M16	4
5	96757737	ELBOW, 90 1.25 TUBE X M42	1
6	96758107	CONNECTOR 1.25 TUBE X M42	3
7	96950308	FLANGE CLAMP, SPLIT HALF 4.00 NOMINAL	2

SEE DETAIL D



DETAIL D
SCALE 0.150

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	23425028	VALVE, ASSEMBLY HS THERMAL 102mm-M42 180°F-198°F (7.5-10 BAR)
1	23533227	VALVE, ASSEMBLY HS THERMAL 102mm-M42 195°F-212°F (14 BAR/200 PSIG)



Part Number : 23464092

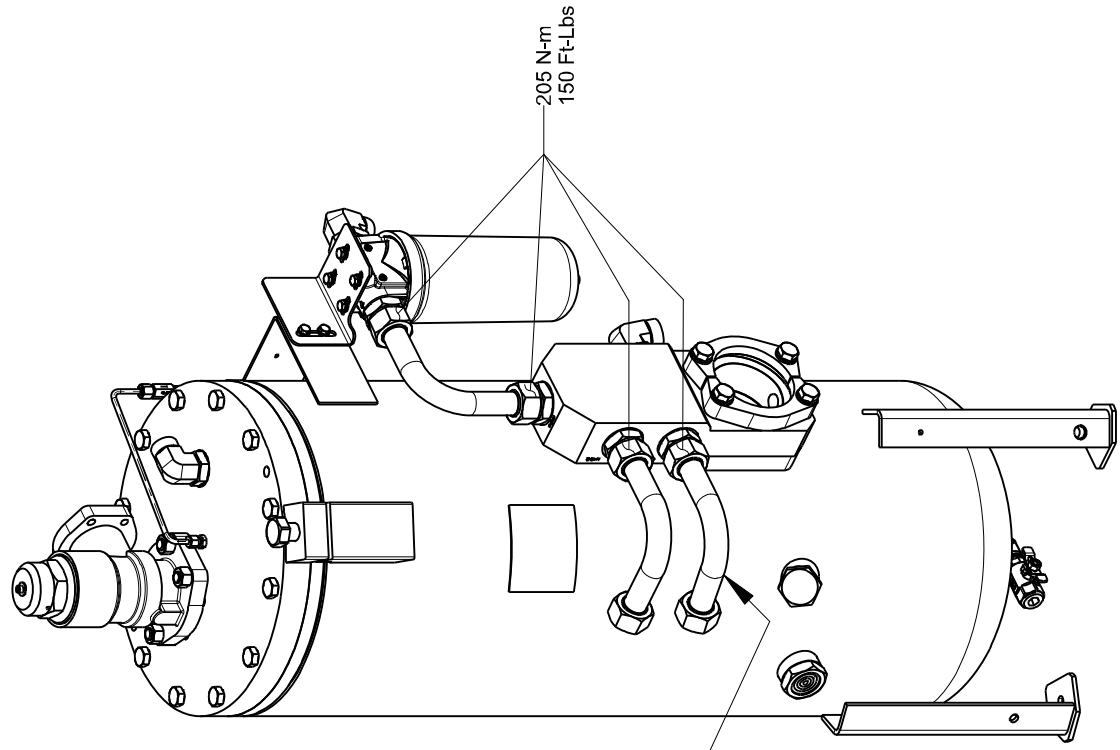
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Industrial Technologies

REV **D**
Title : **ASSEMBLY INST.,
SEPARATOR TANK**

Description
ASSEMBLY TUBES.

Item	Part No.	Description	Qty.
1	23429632	TUBE, HSTCV TO COOLER	3





Part Number : 23464092

ASSEMBLY INST., SEPARATOR TANK

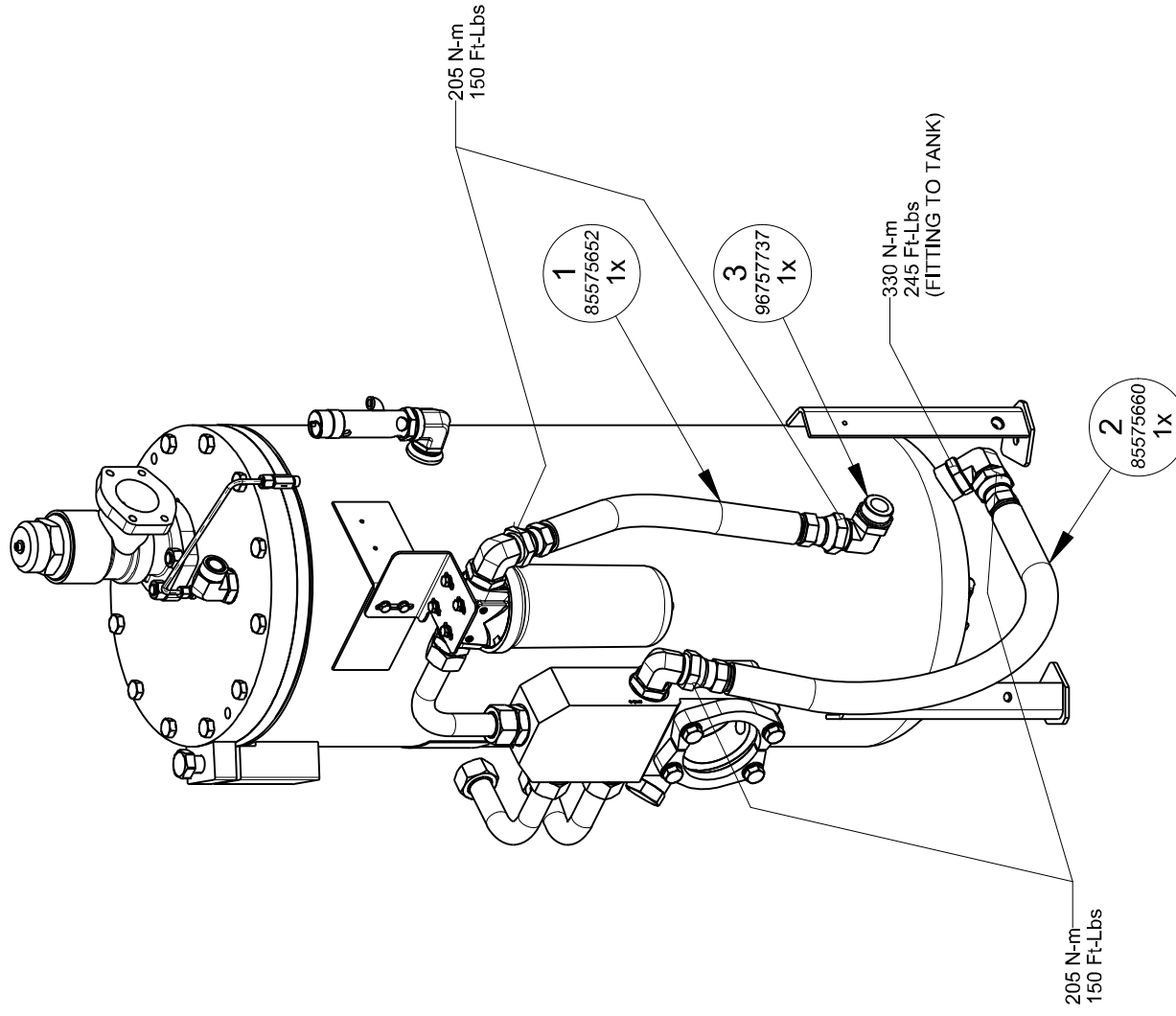
REV **D**

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Title :

Item	Part No.	Description	Qty.
1	85575652	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (22 INCHES LONG)	1
2	85575660	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (32 INCHES LONG)	1
3	96757737	ELBOW, 90 1.25 TUBE X M42	1

Description
ASSEMBLE OIL LINE HOSES.





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Part Number :

23464092

Title :

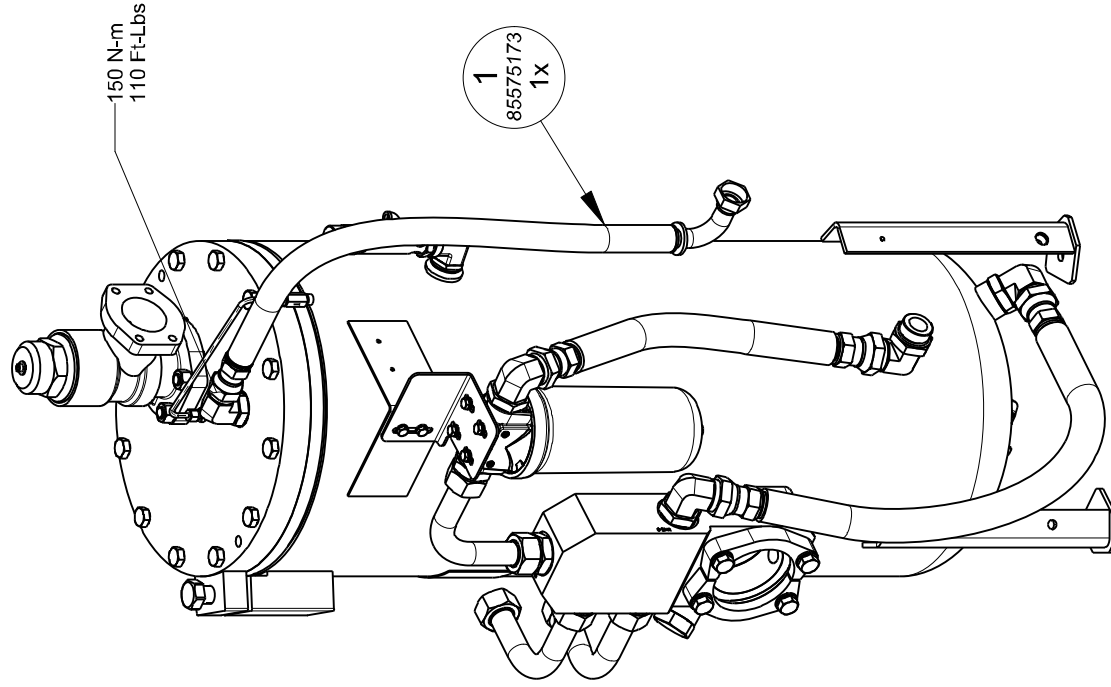
**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

Item	Part No.	Description	Qty.
1	85575173	HOSE, HYD (-16) 1.0 ORFS X 1.0 90 DEG ORFS (34 INCHES LONG)	1

Description
ASSEMBLE BLOWDOWN HOSE. ---(ON/OFF AND MODULATION INLET VALVE)---





Part Number : **23464092**

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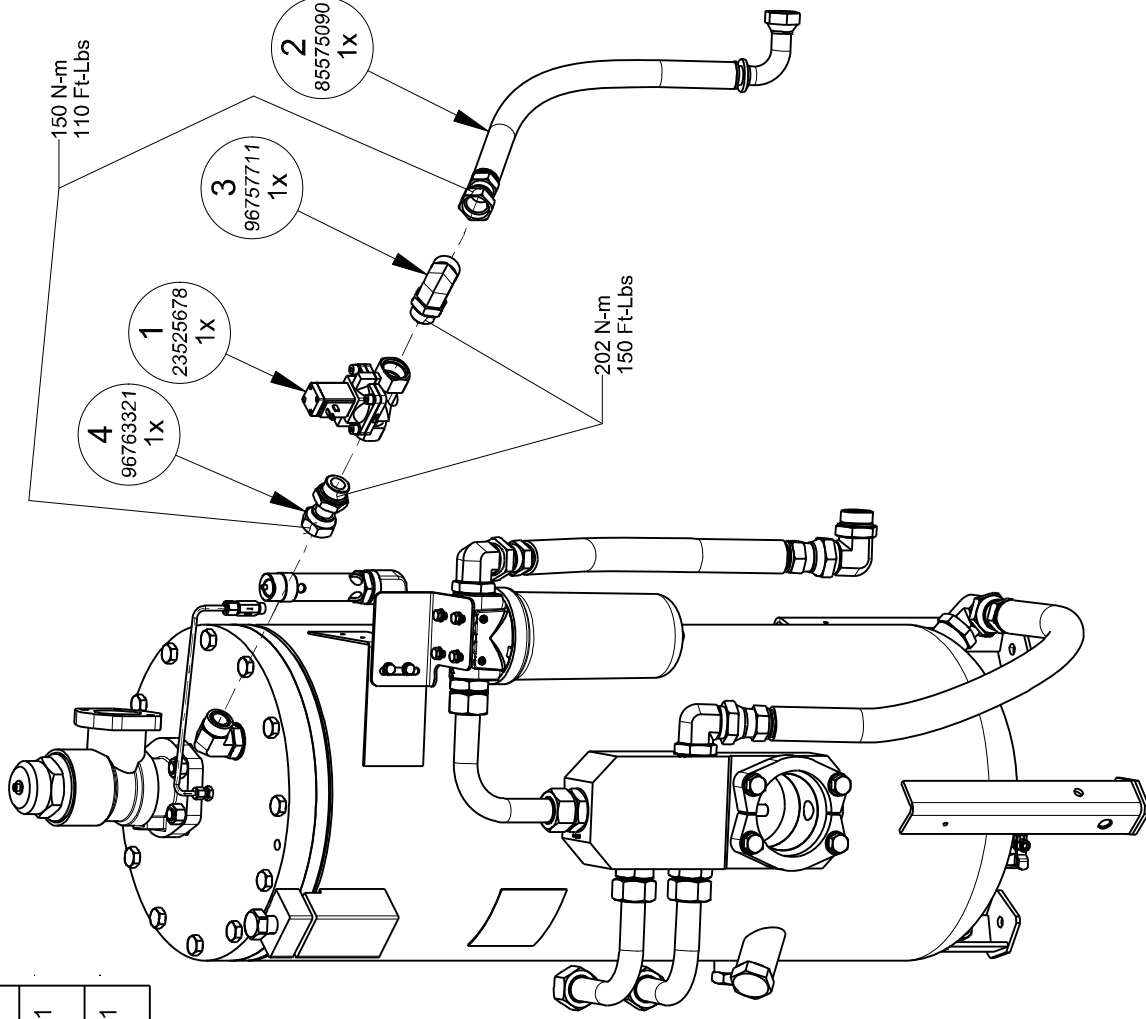
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**ASSEMBLY INST.,
SEPARATOR TANK**

REV **D**

Item	Part No.	Description	Qty.
1	23525678	VALVE, SOLENOID - BLOWDOWN M33 - 110/120V 50/60Hz (NO)	1
2	85575090	HOSE, HYD (-16) 1.0 ORFS X 1.0 90 DEG ORFS (26 INCHES LONG)	1
3	96757711	ELBOW, 90 1.0 TUBE X M33	1
4	96763321	CONNECTOR 1.0 ORFS SW X M33 X 3	1

Description
ASSEMBLE BLOWDOWN HOSE AND STOP VALVE. -----(VSD INLET VALVE ONLY)-----





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Part Number :

23464092

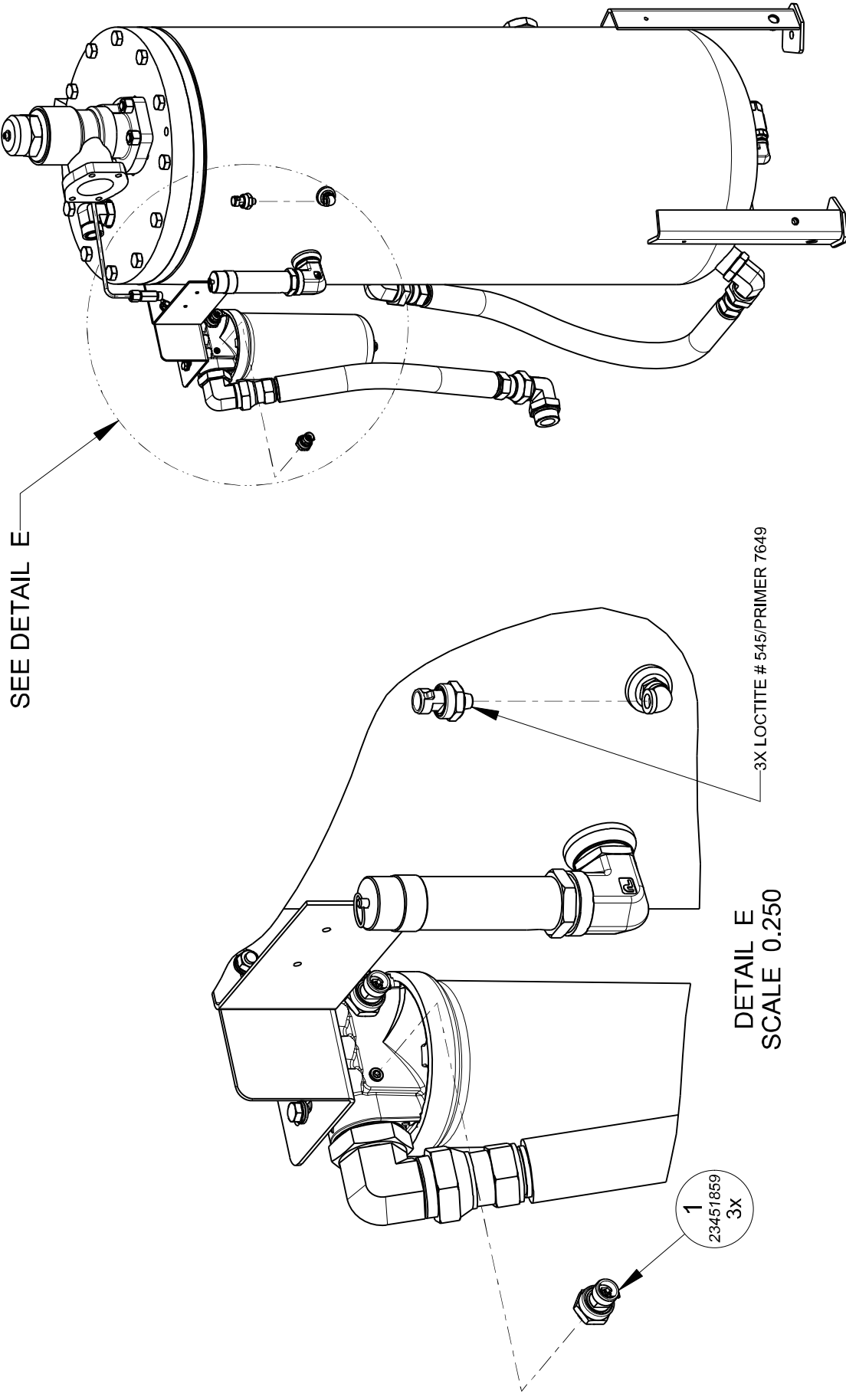
Title :

**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

Item	Part No.	Description	Qty.	Description
1	23451859	TRANSDUCER, PRESSURE 225 PSI, 5 VDC	3	ASSEMBLE PRESSURE TRANSDUCERS.



SEE DETAIL E

DETAIL E
SCALE 0.250

3X LOCTITE # 545/PRIMER 7649

1
23451859
3X



Part Number : 23464092

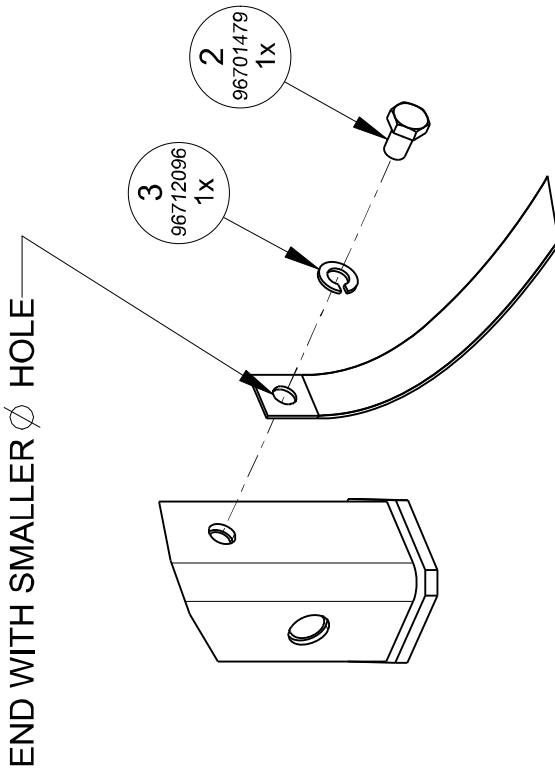
44

ASSEMBLY INST., SEPARATOR TANK

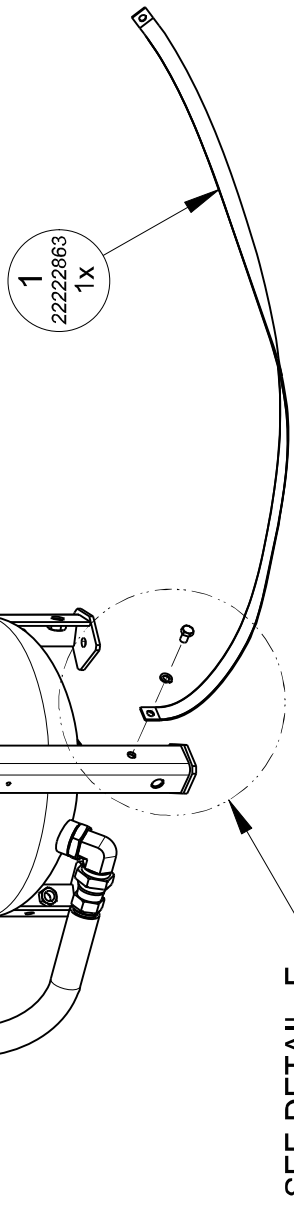
REV
D

Item	Part No.	Description	Qty.
1	22222863	STRAP, EARTH GROUND 1500MM LONG	1
2	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	1
3	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	1

Description
ASSEMBLE GROUND STRAP TO SEPARATOR TANK LEG AND COIL UP.



DETAIL F
SCALE 0.300





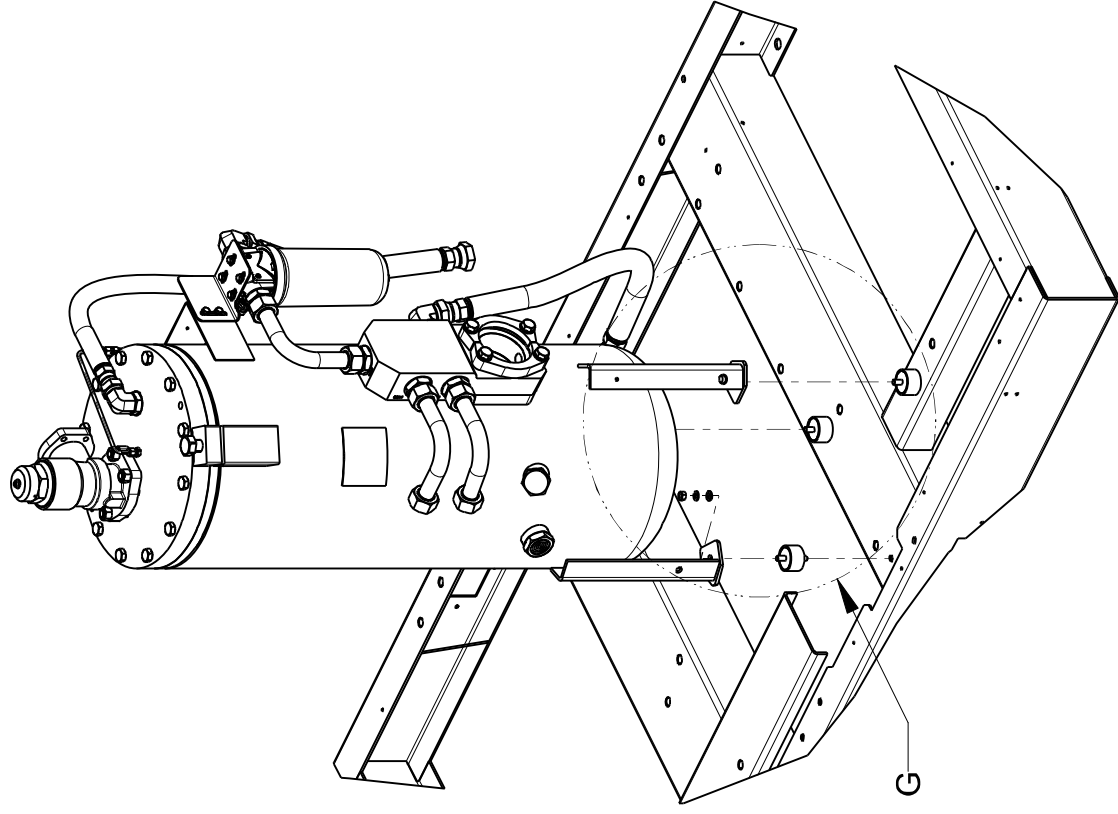
Ingersoll Rand
Industrial Technologies

Part Number : **23464092**

REV **D**
Title : **ASSEMBLY INST.,
SEPARATOR TANK**

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Item	Part No.	Description	Qty.	Description
1	23388994	MOUNT, ISOLATION (M10 X .75 INCH LONG STUDS)	3	ASSEMBLE SHOCK MOUNTS TO BASE AND SET SEPARATOR TANK IN PLACE.
2	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	3	NOTES: 1. INSTALL HAND TIGHT.
3	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	3	2. TORQUE UNTIL SHOCK MOUNT BEGINS TO ROTATE, OR A MAXIMUM TORQUE OF 40 N-m/30 Ft-Lbs IS REACHED.
4	96714399	WASHER, PRODUCT GRADE A M10	3	



SEE DETAIL G

SEE NOTE 2
TYP

2
96704812
3X

3
96712096
3X

4
96714399
3X

1
23388994
3X

SEE NOTE 1
TYP

DETAIL G
SCALE 0.150



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Part Number : **23464092**

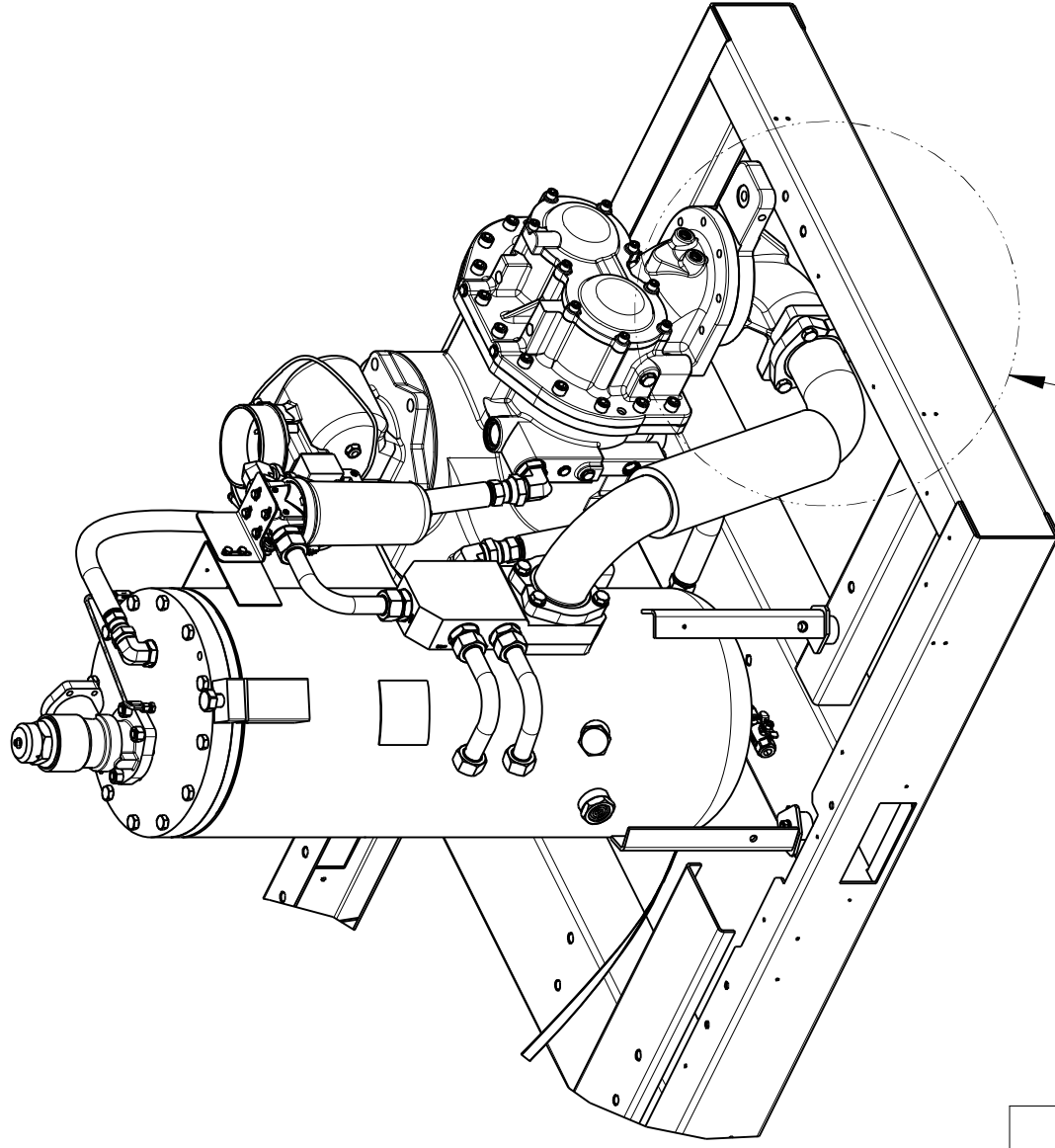
Title : **ASSEMBLY INST.,
SEPARATOR TANK**

REV **D**

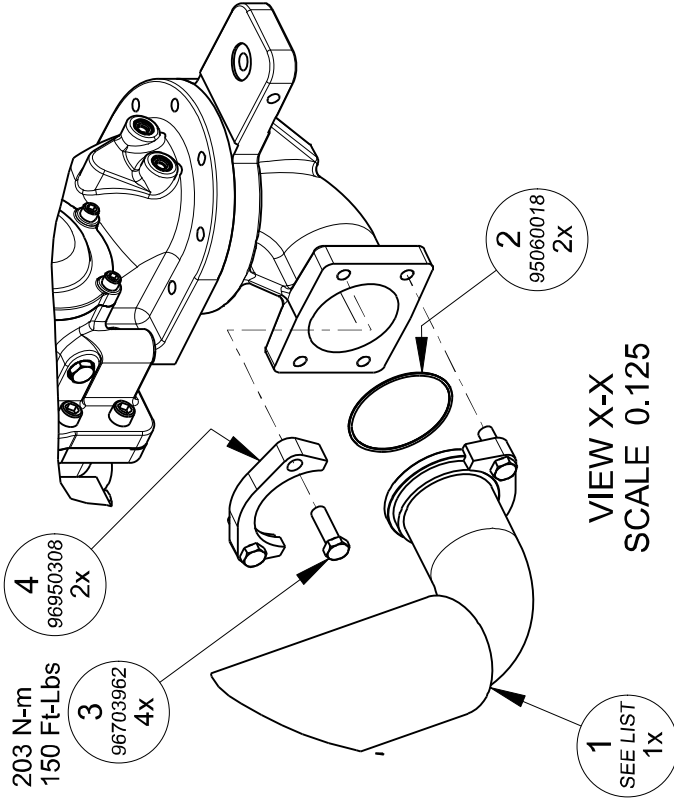
46

Item	Part No.	Description	Qty.
1	SEE LIST	TUBE, AIREND DISCHARGE	1
2	95060018	ORING, STANDARD -245 4.375 ID X .125 WIDTH	2
3	96703962	SCREW, HEX HEAD M16-2.00 X 50.0 LONG	4
4	96950308	FLANGE CLAMP, SPLIT HALF 4.00 NOMINAL	2

Description
ASSEMBLE AIR DISCHARGE PIPE TO AIREND AND SEPARATOR TANK.



SEE EXPLODED VIEW X



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	23415748	TUBE, AIREND DISCHARGE (AS1210, ASME, CRN, NR-13, GB150, PACIFIC RIM TUV)
1	23522345	TUBE, AIREND DISCHARGE (PED FOR CE)



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Part Number :

23464092

Title :

**ASSEMBLY INST.,
SEPARATOR TANK**

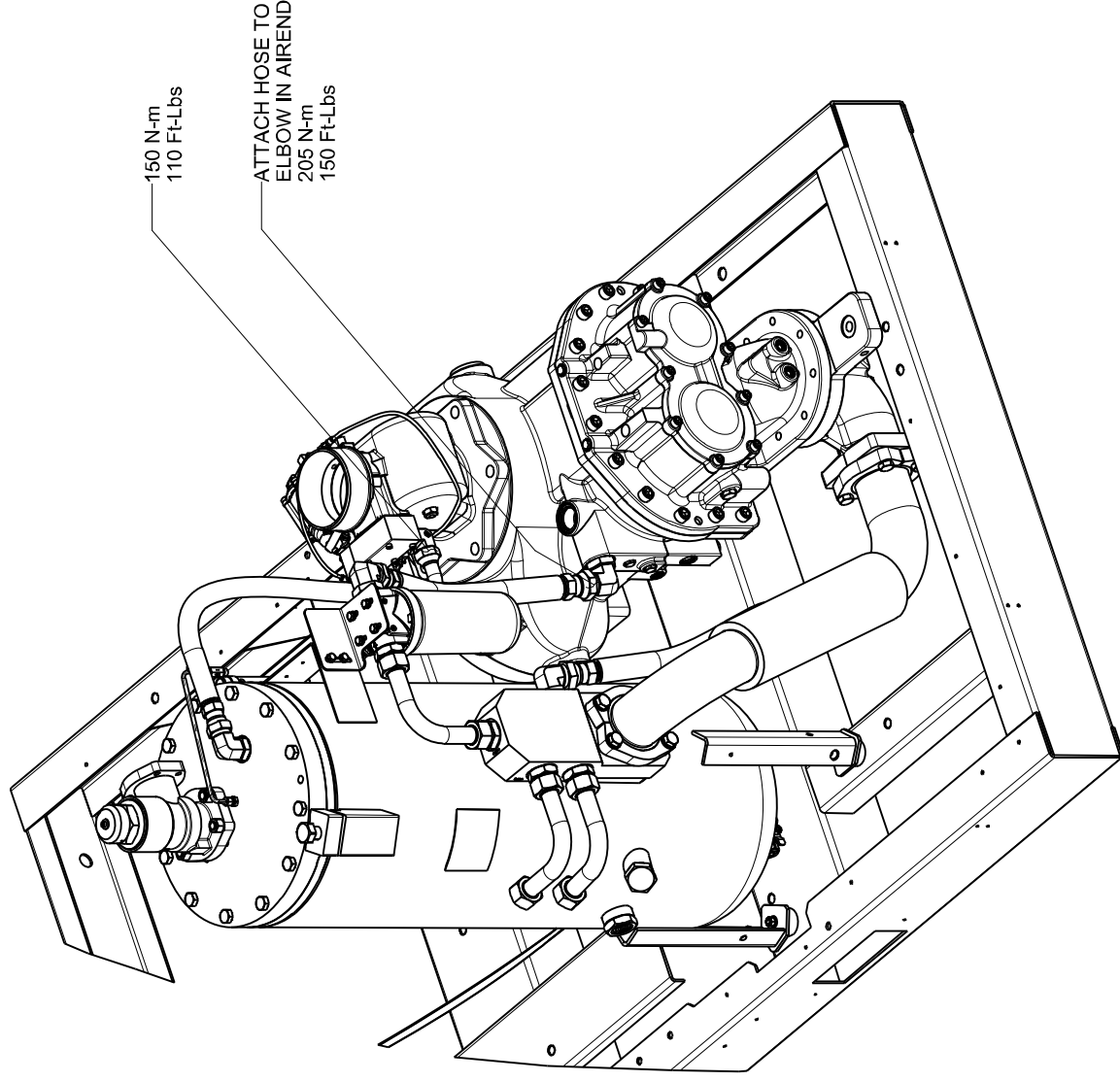
REV

D

Item	Part No.	Description	Qty.

Description

ASSEMBLE OIL FEED LINE TO AIREND AND BLOWDOWN LINE TO INLET VALVE.





Part Number : 23464092

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Title :

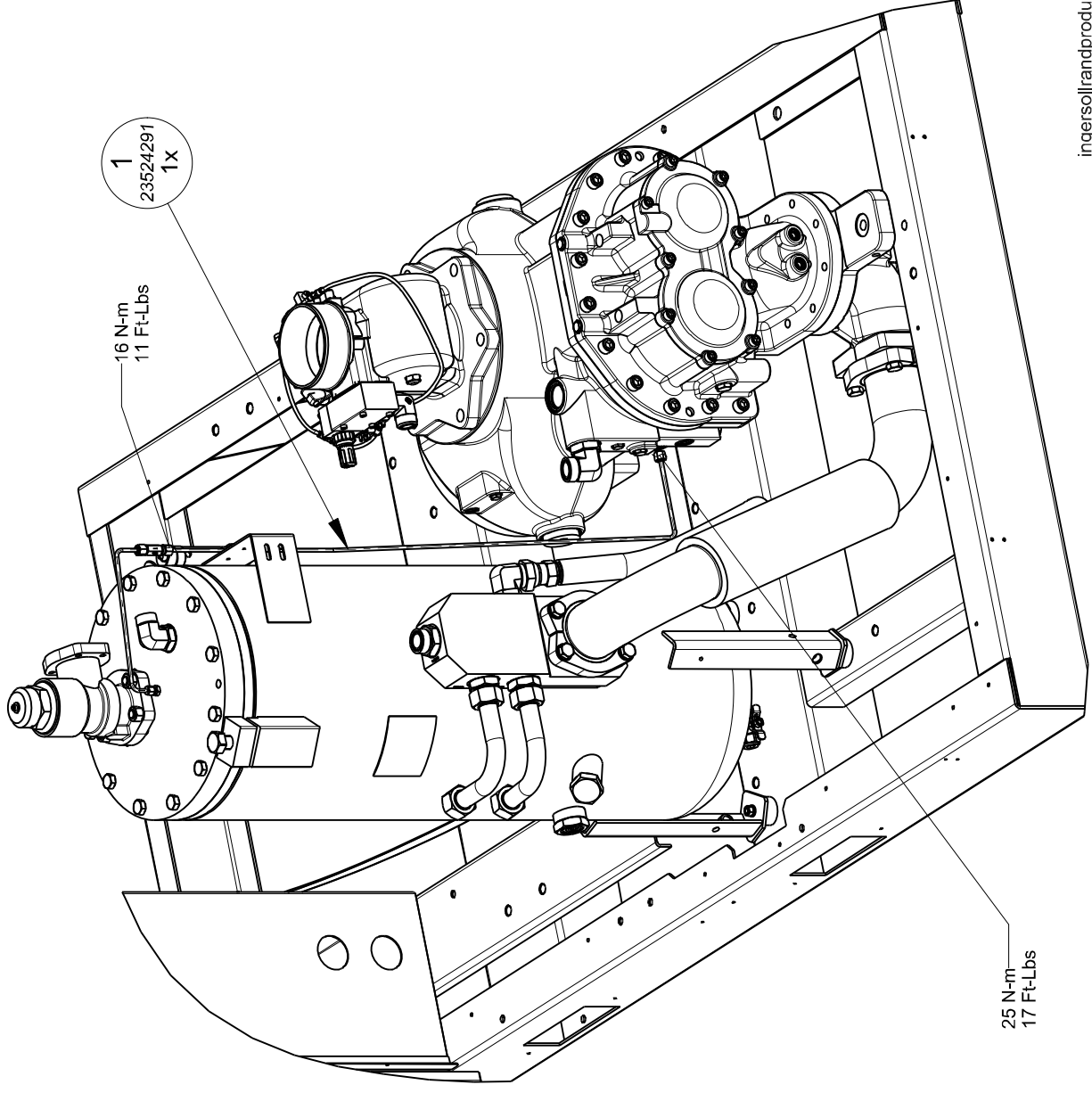
**ASSEMBLY INST.,
SEPARATOR TANK**

REV

D

Item	Part No.	Description	Qty.
1	23524291	TUBE, SCAVENGE ON ULTRA COOLANT	1

Description
ASSEMBLE OIL SCAVENGE HOSE FROM SEPARATOR TANK TO AIREND.





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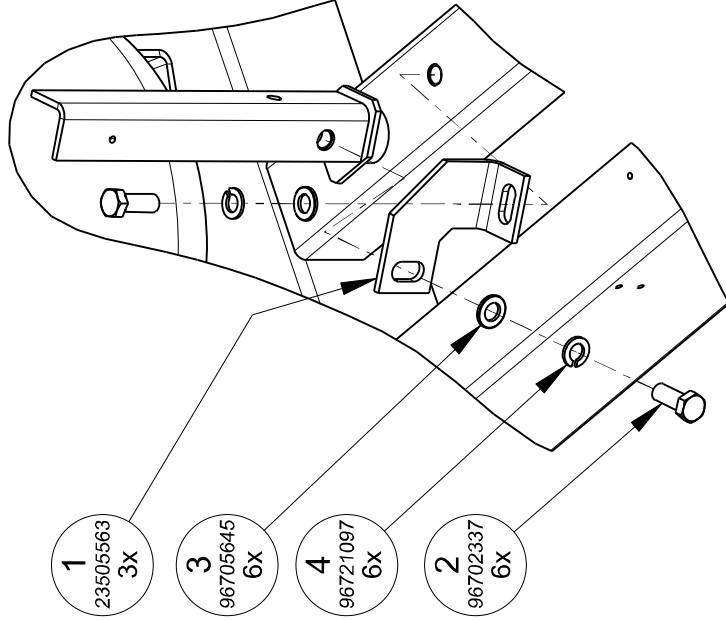
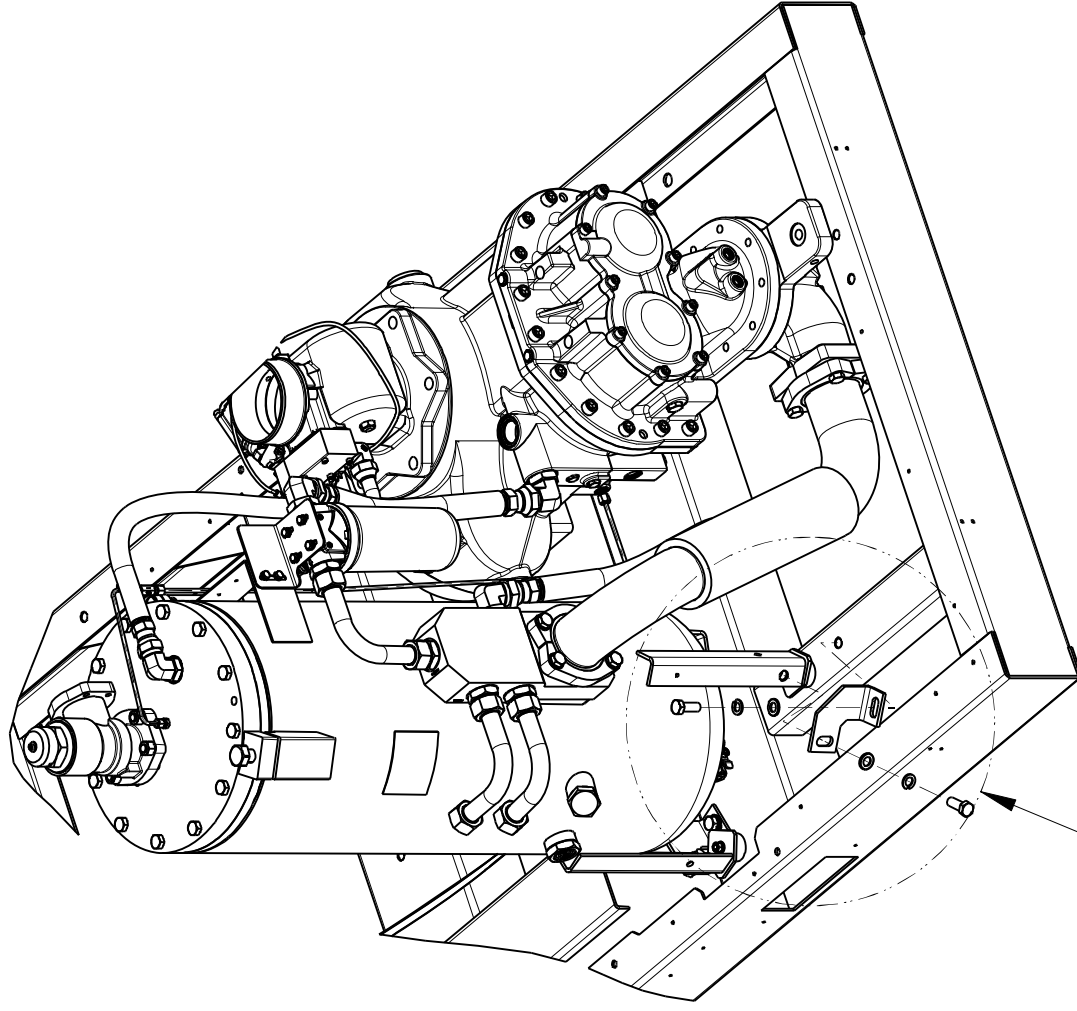
Part Number : **23464092**

REV **D**
Title : **ASSEMBLY INST.,
SEPARATOR TANK**

49

Item	Part No.	Description	Qty.
1	23505563	BRACE, TANK SHIPPING	3
2	96702337	SCREW, HEX HEAD M16-2.00 X 40.0 LONG	6
3	96705645	WASHER, PRODUCT GRADE A M16	6
4	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	6

Description
ASSEMBLE SEPARATOR TANK SHIPPING BRACES TO LEGS AND BASE.



DETAIL H
SCALE 0.150

SEE DETAIL H



Part Number : **23463607**

50

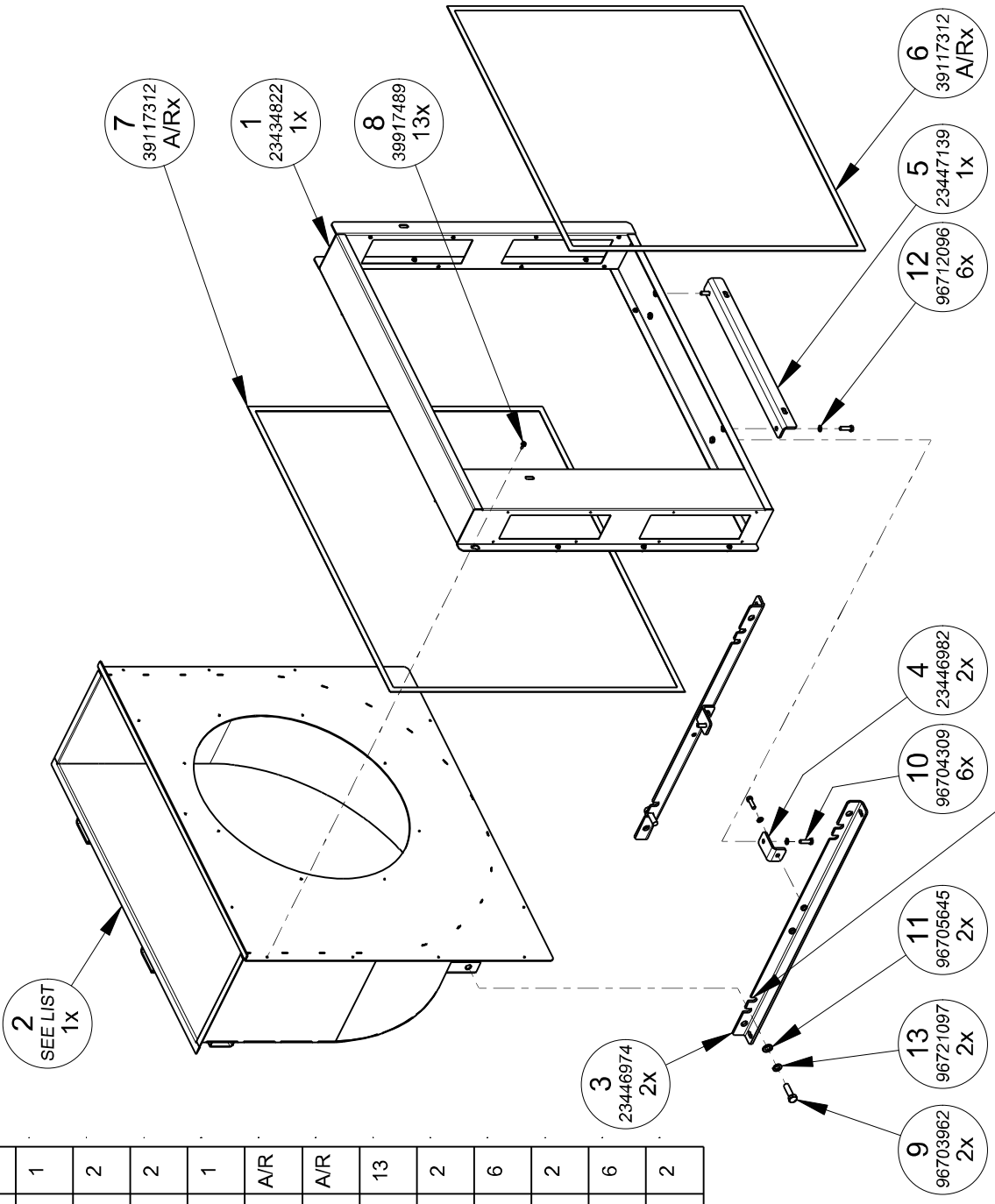
Title :

**ASSEMBLY INST., COOLING
(AIR COOLED)**

REV **D**

Item	Part No.	Description	Qty.
1	23434822	PLENUM, BLOWER	1
2	SEE LIST	SHROUD, BLOWER	1
3	23446974	ANGLE, BLOWER / COOLER SUPPORT (COMMON)	2
4	23446982	BRACE, PLENUM	2
5	23447139	ANGLE, COOLER MOUNTING	1
6	39117312	GASKET, STRIP .06THK X .75 WIDE W/ADHESIVE BACK	A/R
7	39117312	GASKET, STRIP .06THK X .75 WIDE W/ADHESIVE BACK	A/R
8	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	13
9	96703962	SCREW, HEX HEAD M16-2.00 X 50.0 LONG	2
10	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	6
11	96705645	WASHER, PRODUCT GRADE A M16	2
12	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	6
13	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2

Description
ASSEMBLE BLOWER HOUSING AND COOLER PLENUM.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
2	23434855	60 HZ HOUSING
2	23436702	50 HZ HOUSING

50 HERTZ BLOWER HOUSING MOUNTS HERE. (60 HZ ILLUSTRATED)



Part Number : **23463607**

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Title :

**ASSEMBLY INST., COOLING
(AIR COOLED)**

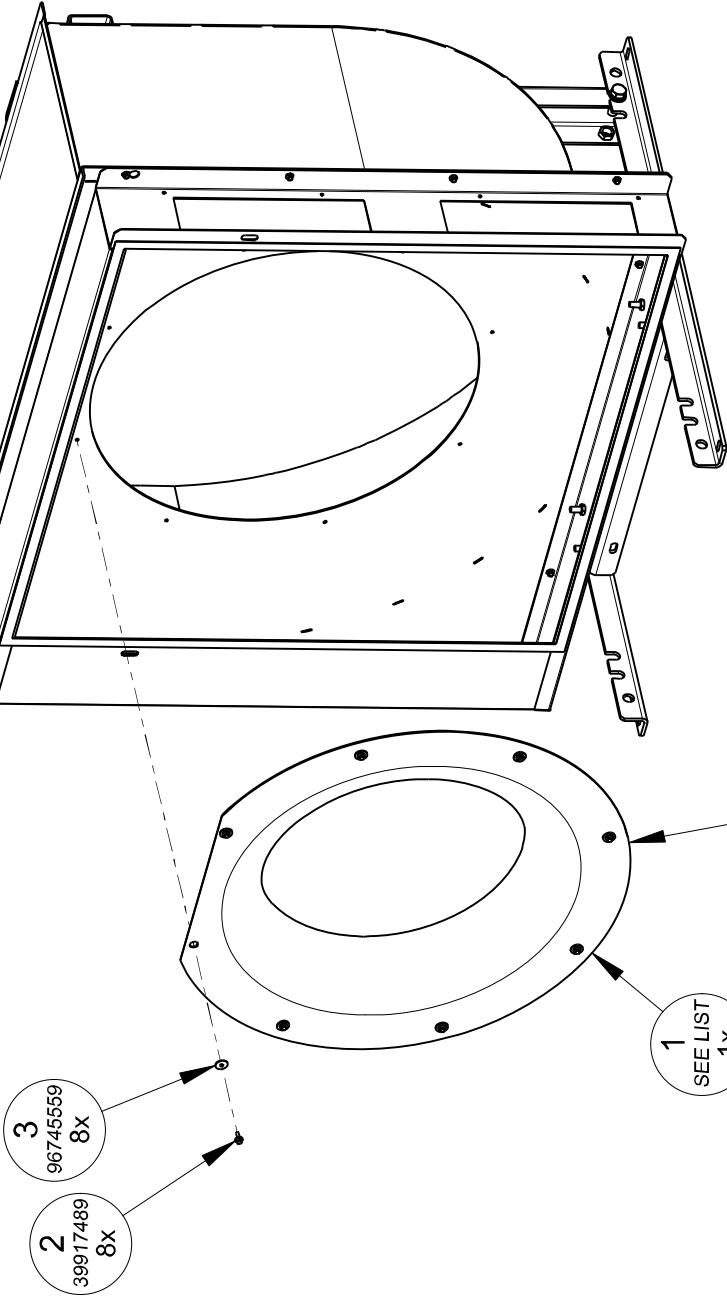
REV **D**

Item	Part No.	Description	Qty.
1	SEE LIST	CONE, INLET	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	8
3	96745559	WASHER, LARGE OUTSIDE DIAMETER PRODUCT GRADE C M6	8

Description
ASSEMBLE BLOWER CONE TO BLOWER HOUSING.

NOTES:

1. QUANTITIES OF ITEMS 2 (39917489) AND ITEM 3 (96745559) TO USE ON THE 50 HERTZ PACKAGE IS 6.



ADJUST POSITION TO ENSURE NO CONTACT WITH BLOWER WHEEL

ALTERNATE PARTS LIST	
ITEM	PART NO. DESCRIPTION
1	23417165 INLET CONE - 60 HZ
1	23391352 INLET CONE - 50 HZ



Part Number : 23463607

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Title :

ASSEMBLY INST., COOLING (AIR COOLED)

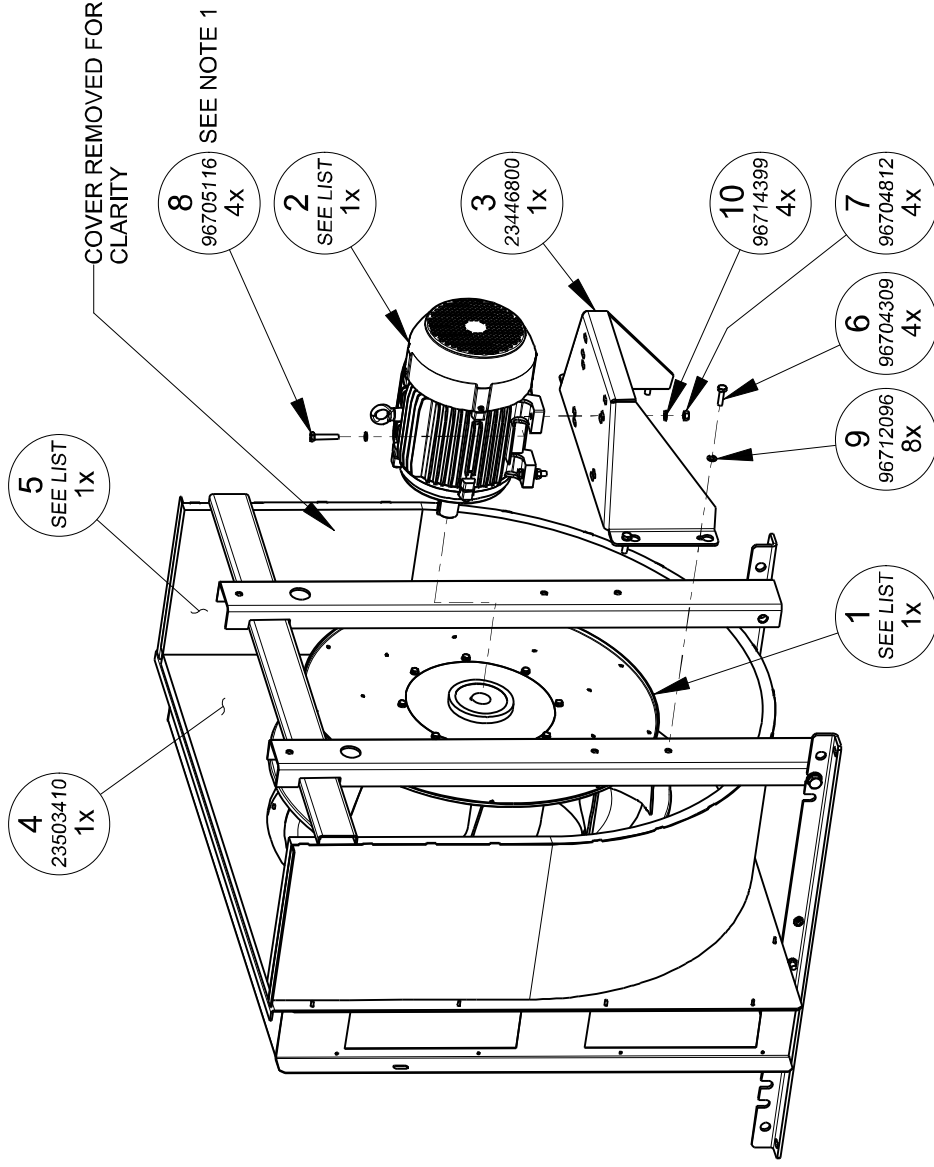
REV **D**

Item	Part No.	Description	Qty.
1	SEE LIST	BLOWER	1
2	SEE LIST	MOTOR, BLOWER	1
3	23446800	SUPPORT, BLOWER MOTOR	1
4	23503410	FOAM, BLOWER SHROUD	1
5	SEE LIST	FOAM	1
6	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	4
7	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	4
8	96705116	SCREW, HEX HEAD M10-1.50 X 50.0 LONG	4
9	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	8
10	96714399	WASHER, PRODUCT GRADE A M10	4

NOTES:

1. CAN INSTALL BOLTS FROM THE TOP AS SHOWN,
OR FROM THE BOTTOM IF NEEDED.

ALTERNATE PARTS LIST	
ITEM	DESCRIPTION
1	23413818 BLOWER - 60 Hz
1	23413800 BLOWER - 50 Hz
2	23423635 MOTOR - 380V 60 Hz
2	23423643 MOTOR - 440V 60 Hz
2	23423650 MOTOR - 460V 60 Hz
2	23423668 MOTOR - 575V 60 Hz
2	23423627 MOTOR - 400V 50 Hz
5	23503436 60 Hz HOUSING
5	23503428 50 Hz HOUSING





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Part Number : **23463607**

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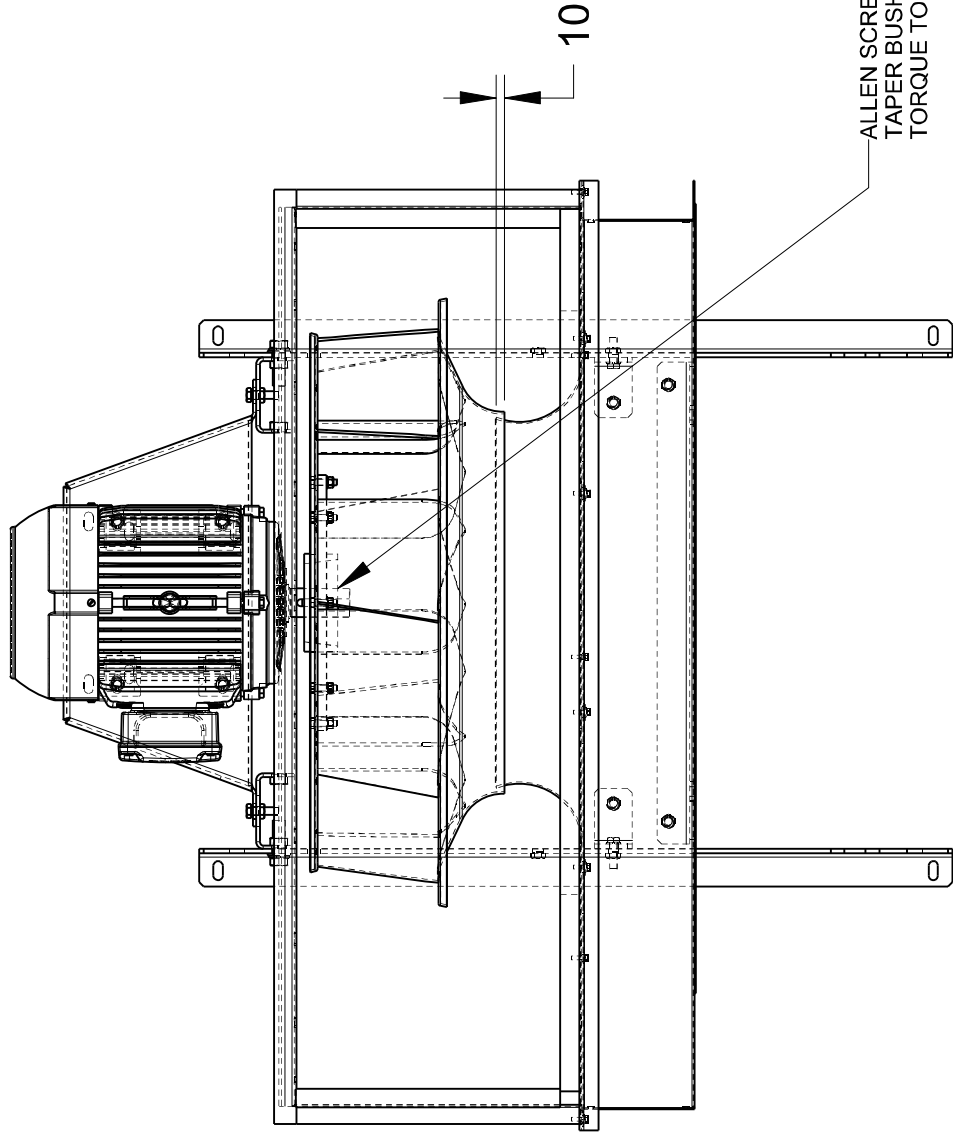
Title :

**ASSEMBLY INST., COOLING
(AIR COOLED)**

REV

D

Item	Part No.	Description	Qty.	Description
				ASSEMBLY BLOWER AND BLOWER MOTOR.





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Part Number :

23463607

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Title :

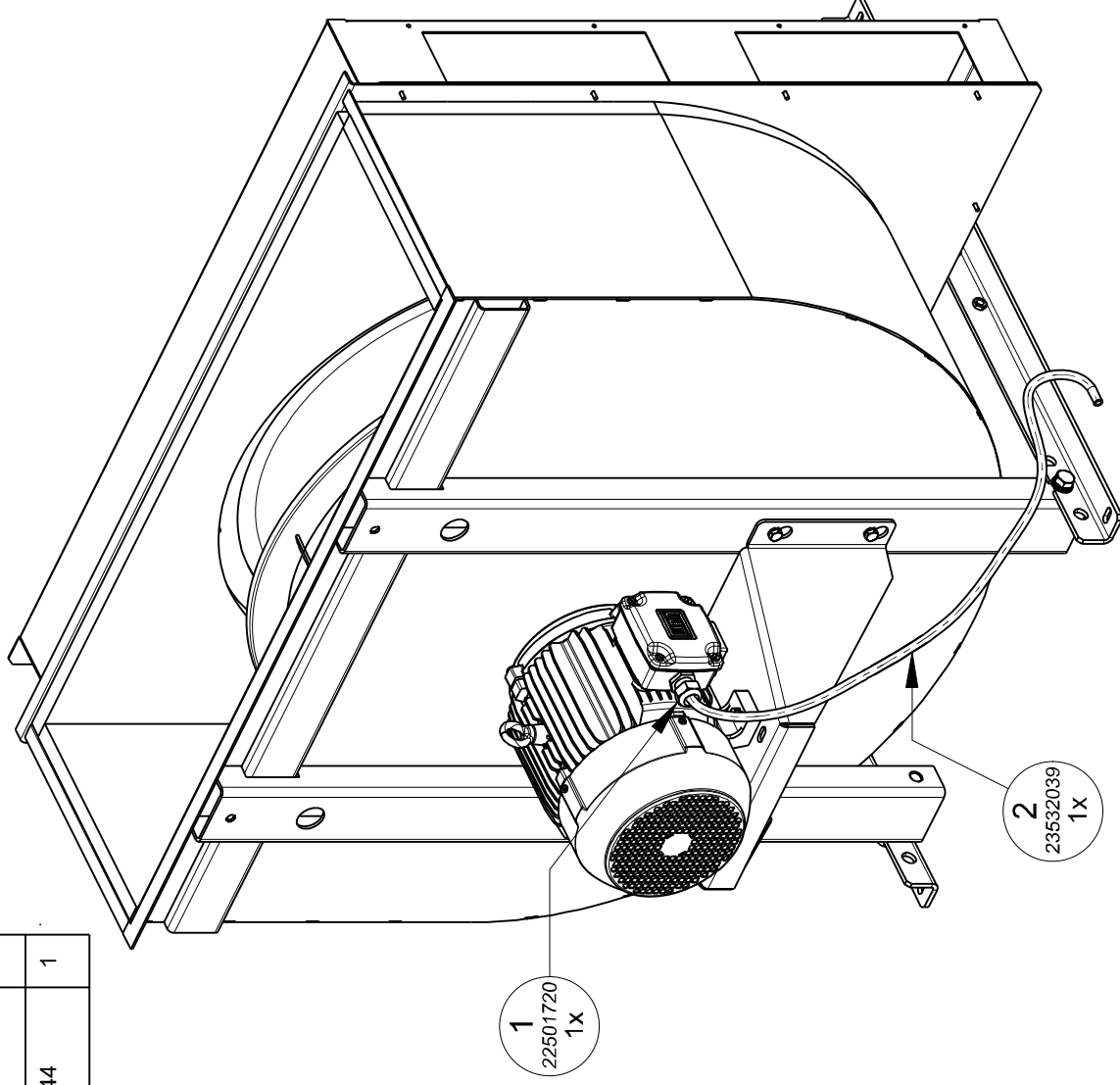
**ASSEMBLY INST., COOLING
(AIR COOLED)**

REV

D

Item	Part No.	Description	Qty.
1	22501720	GLAND, CABLE M25X1.5	1
2	23532039	CABLE, ASSEMBLY 14 AWG X 1544 FAN MOTOR	1

Description
ASSEMBLE CABLE AND CABLE GLAND.





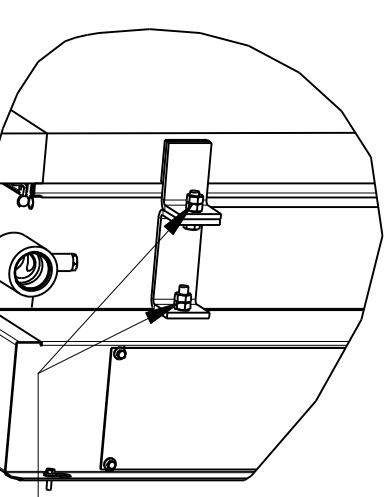
Part Number : **23463607**

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REV **D**
**ASSEMBLY INST., COOLING
 (AIR COOLED)**

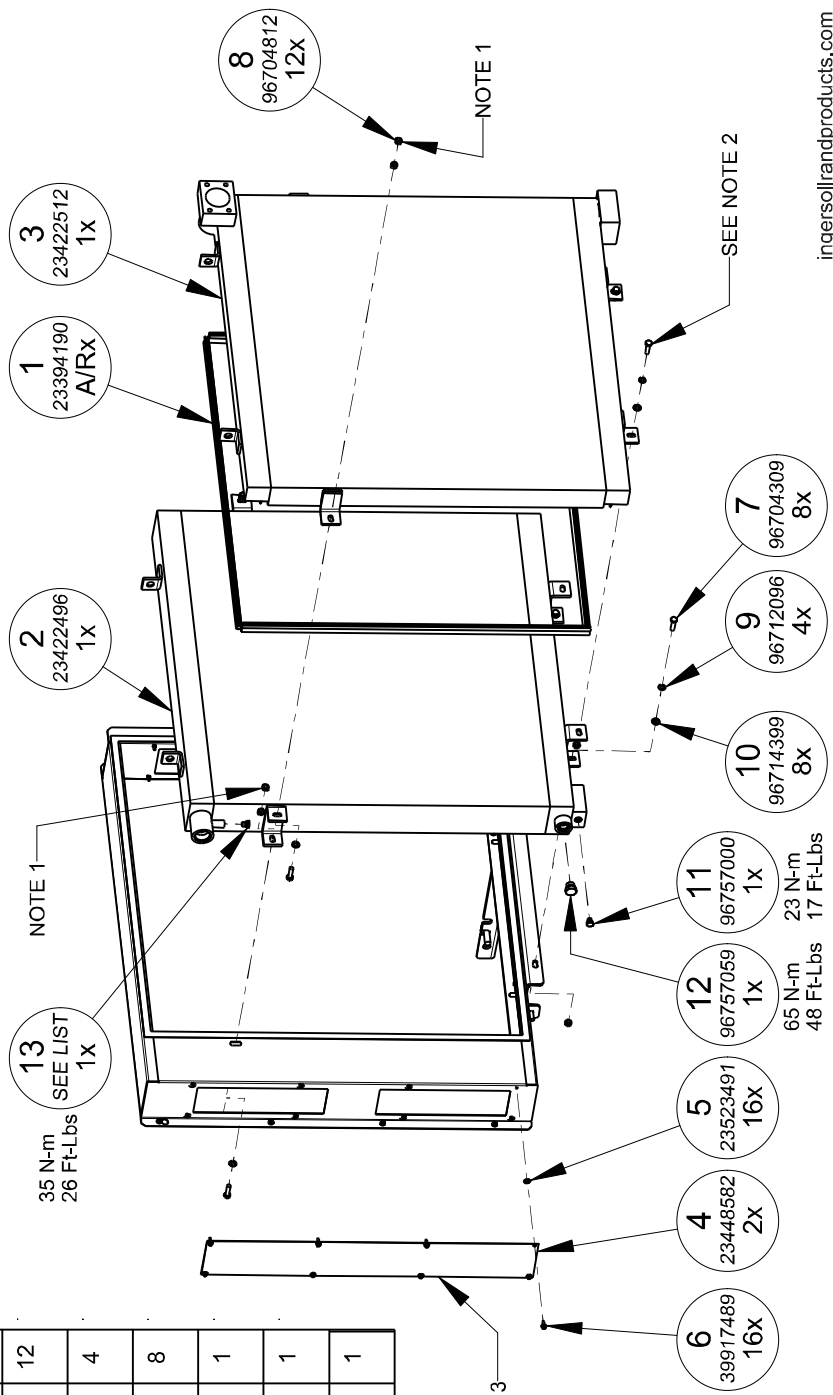
Title :

Description
 ASSEMBLE COOLERS.



- NOTES:
1. FINGER TIGHTEN FIRST NUT THEN JAM SECOND NUT TIGHT TO FIRST. COOLERS MUST NOT BE LOCKED TIGHT TO EACH OTHER OR PLENUM TO ALLOW FOR THERMAL EXPANSION.
 2. FASTENERS AT BOTTOM OF COOLERS NEED TO BE TIGHT.
 3. ASSEMBLE AFTER COOLERS ARE SECURE.

Item	Part No.	Description	Qty.
1	23394190	GASKET, SELF GRIPPING	A/R
2	23422496	COOLER, OIL (90-110 KW)	1
3	23422512	COOLER, AIR (90-110 KW)	1
4	23448582	COVER, COOLER ACCESS	2
5	23523491	RETAINER, 6mm SCREW	16
6	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	16
7	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	8
8	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	12
9	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
10	96714399	WASHER, PRODUCT GRADE A M10	8
11	96757000	PLUG, HEX HEAD M12	1
12	96757059	PLUG, HEX HEAD M22	1
13	SEE LIST	SEE LIST	1



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
13	23522238	SENSOR FOR VSD ONLY	1
13	96757000	PLUG FOR FIXED SPEED	1



Part Number : **23463607**

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Title :

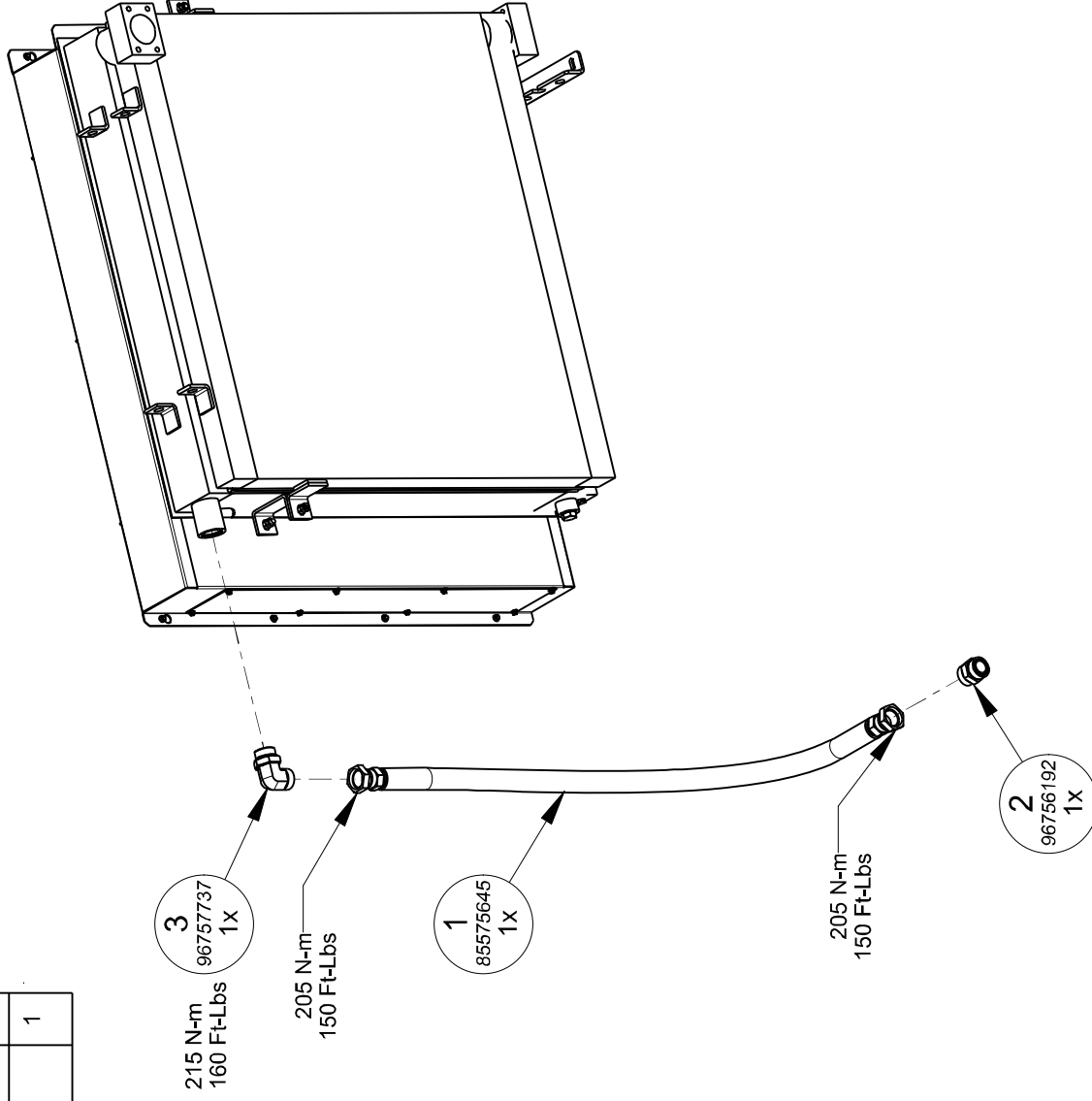
**ASSEMBLY INST., COOLING
(AIR COOLED)**

REV

D

Description
ASSEMBLE OIL COOLER LINES AND FITTINGS.

Item	Part No.	Description	Qty.
1	85575645	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (52 INCHES LONG)	1
2	96756192	UNION, STRAIGHT 1.25	1
3	96757737	ELBOW, 90 1.25 TUBE X M42	1





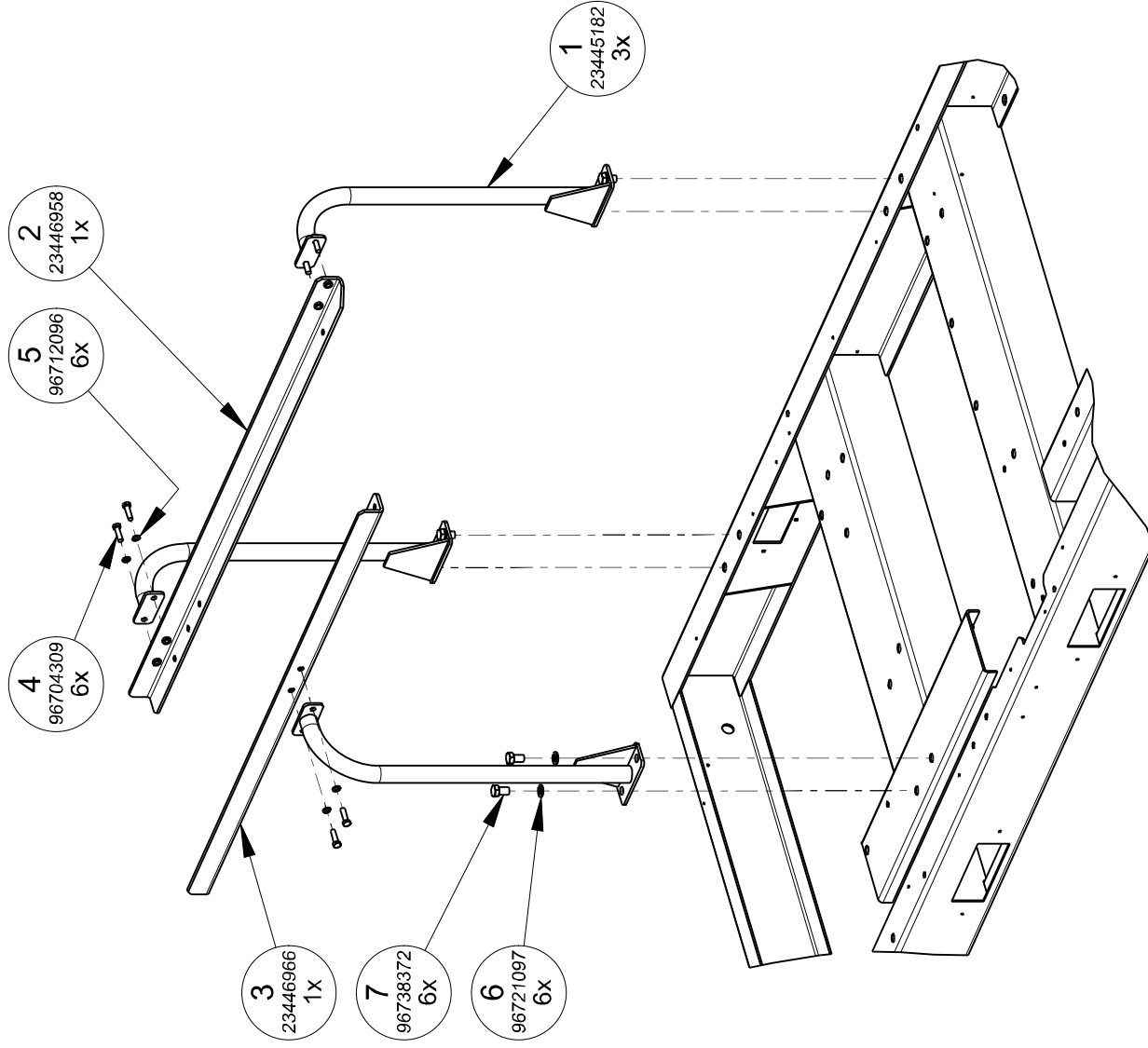
Part Number : **23463607**

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REV **D**
ASSEMBLY INST., COOLING
(AIR COOLED)

Item	Part No.	Description	Qty.
1	23445182	LEG, COOLER / BLOWER SUPPORT	3
2	23446958	ANGLE, BLOWER / COOLER SUPPORT (LONG)	1
3	23446966	ANGLE, BLOWER / COOLER SUPPORT (SHORT)	1
4	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	6
5	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	6
6	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	6
7	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	6

Description
 ASSEMBLE SUPPORT LEGS AND ANGLES.





Part Number : **23463607**

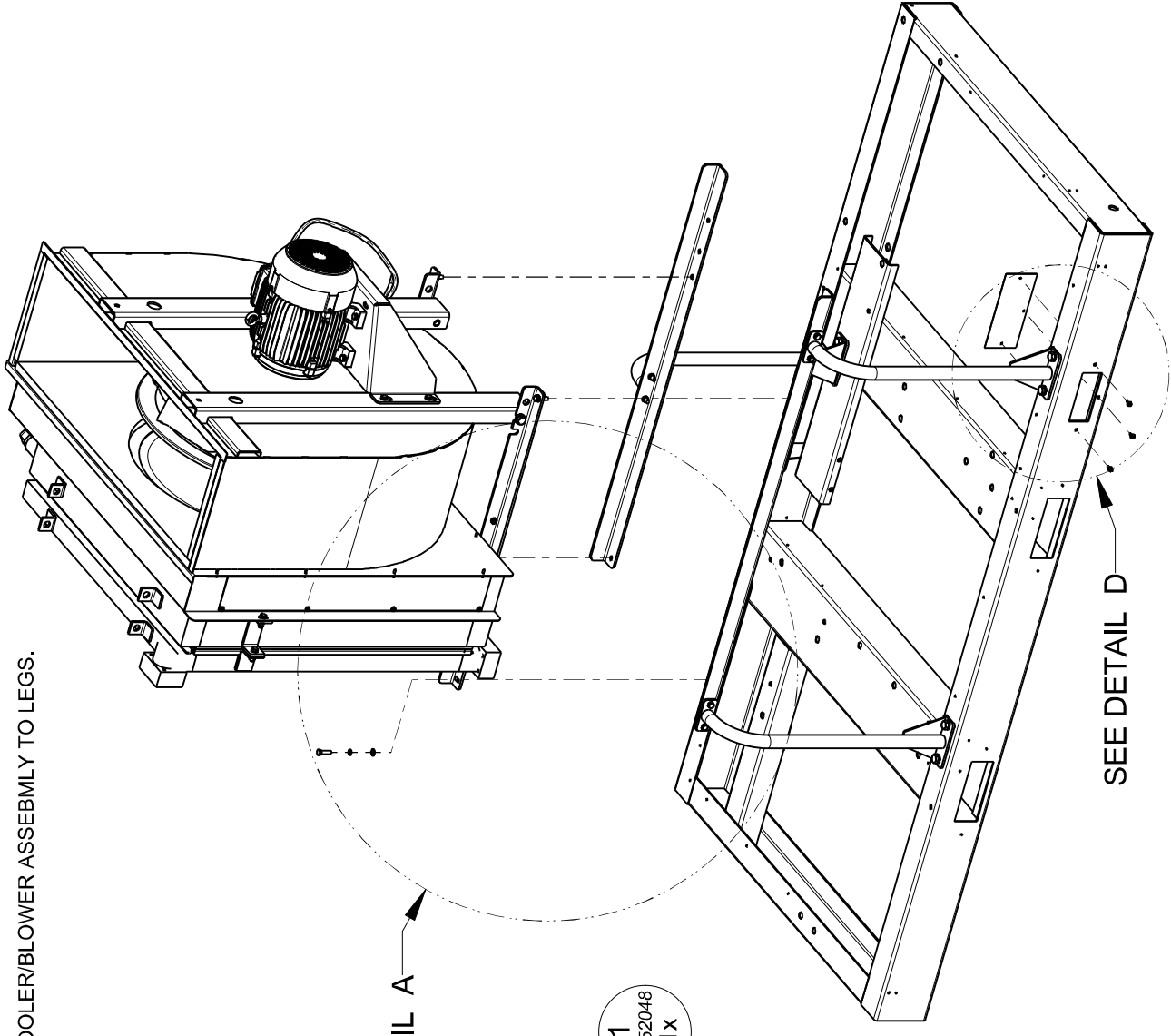
58

REV **D**

**ASSEMBLY INST., COOLING
(AIR COOLED)**

Item	Part No.	Description	Qty.
1	23452048	PLATE, WATER CONNECTION COVER	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	3
3	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	4
4	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
5	96714399	WASHER, PRODUCT GRADE A M10	4

Description
ASSEMBLE COOLER/BLOWER ASSEMBLY TO LEGS.



SEE DETAIL A

SEE DETAIL D

3
96704309
4X

4
96712096
4X

5
96714399
4X

1
23452048
1X

2
39917489
3X

DETAIL A
SCALE 0.060

DETAIL D
SCALE 0.075



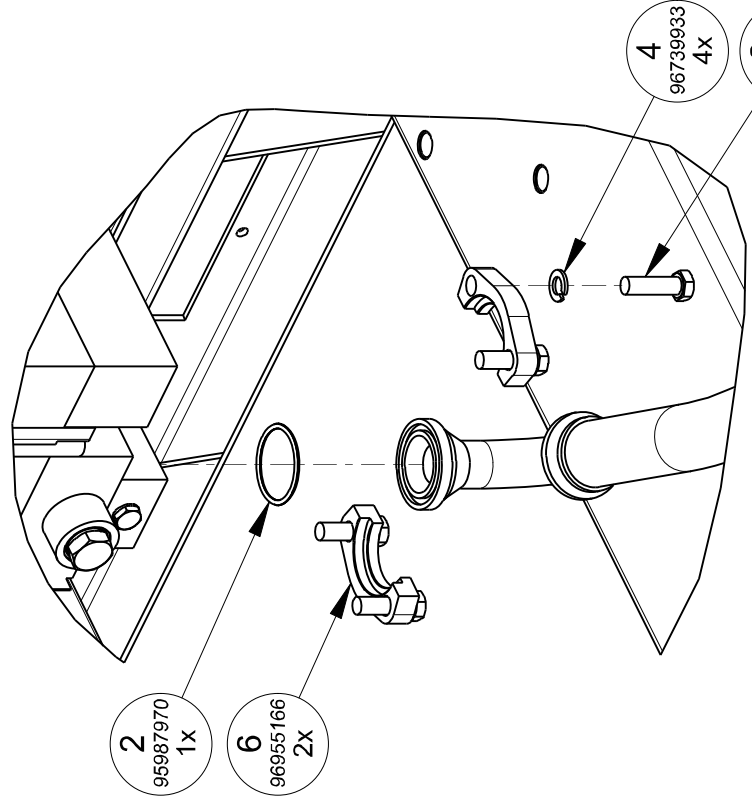
Part Number : **23463607**

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Title : **ASSEMBLY INST., COOLING
(AIR COOLED)**

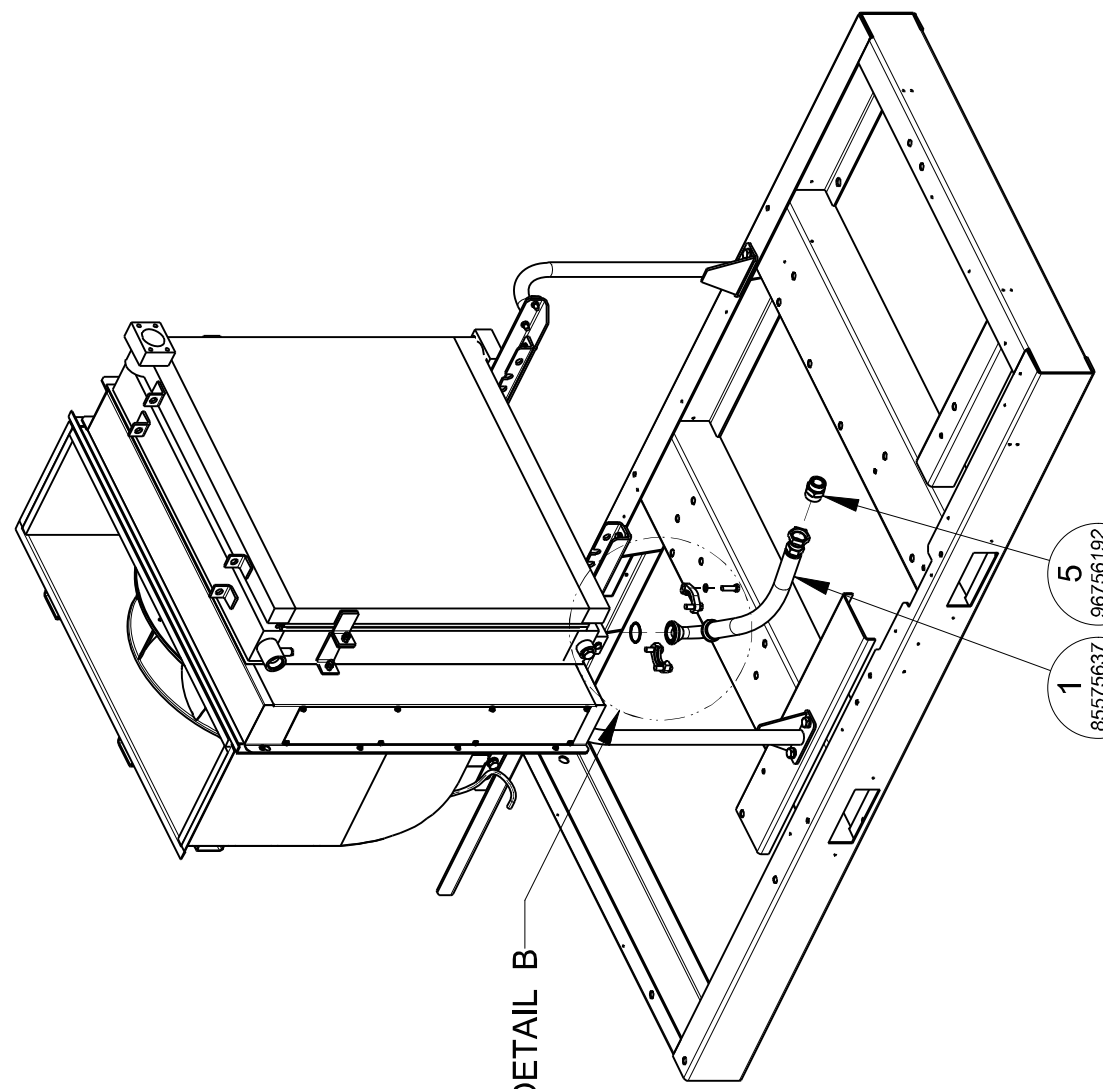
REV **D**

Item	Part No.	Description	Qty.	Description
1	85575637	HOSE, HYD (-20) 90 DEG DN38 X 1.25 ORFS (28 INCHES LONG)	1	ASSEMBLE OIL COOLER LINES.
2	95987970	ORING, STANDARD -225 1.875 ID X .125 WIDTH	1	
3	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	4	
4	96739933	WASHER, SPRING LOCK, CURVED TYPE A, M12	4	
5	96756192	UNION, STRAIGHT 1.25	1	
6	96955166	FLANGE CLAMP, SPLIT HALF 1.50 NOMINAL	2	



2 95987970 1X
3 96702444 4X
4 96739933 4X
6 96955166 2X

DETAIL B
SCALE 0.200



SEE DETAIL B

1 85575637 1X
5 96756192 1X

205 N-m
150 Ft-Lbs



Part Number : 23463607

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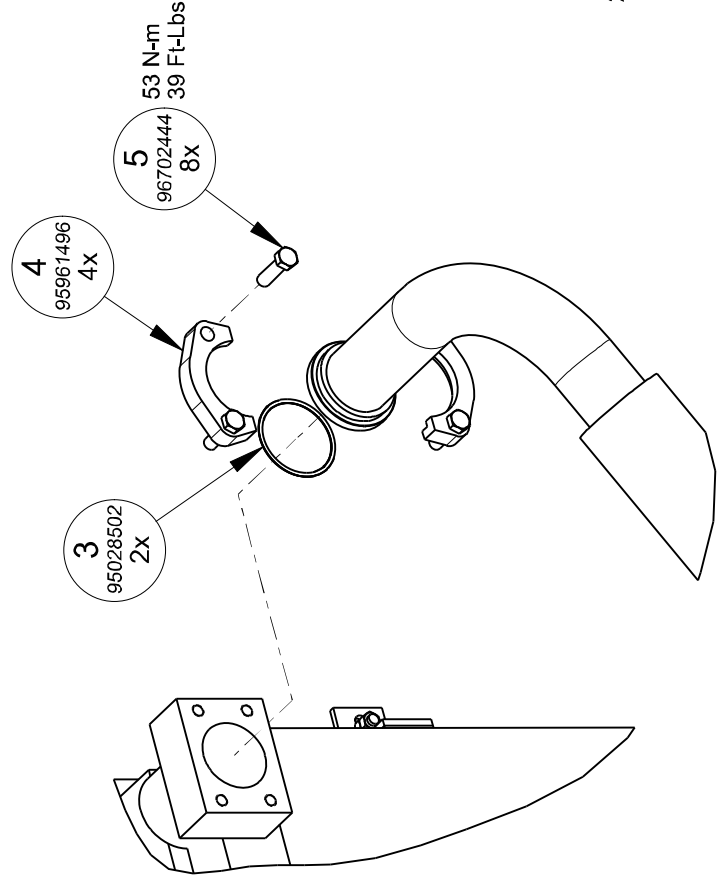
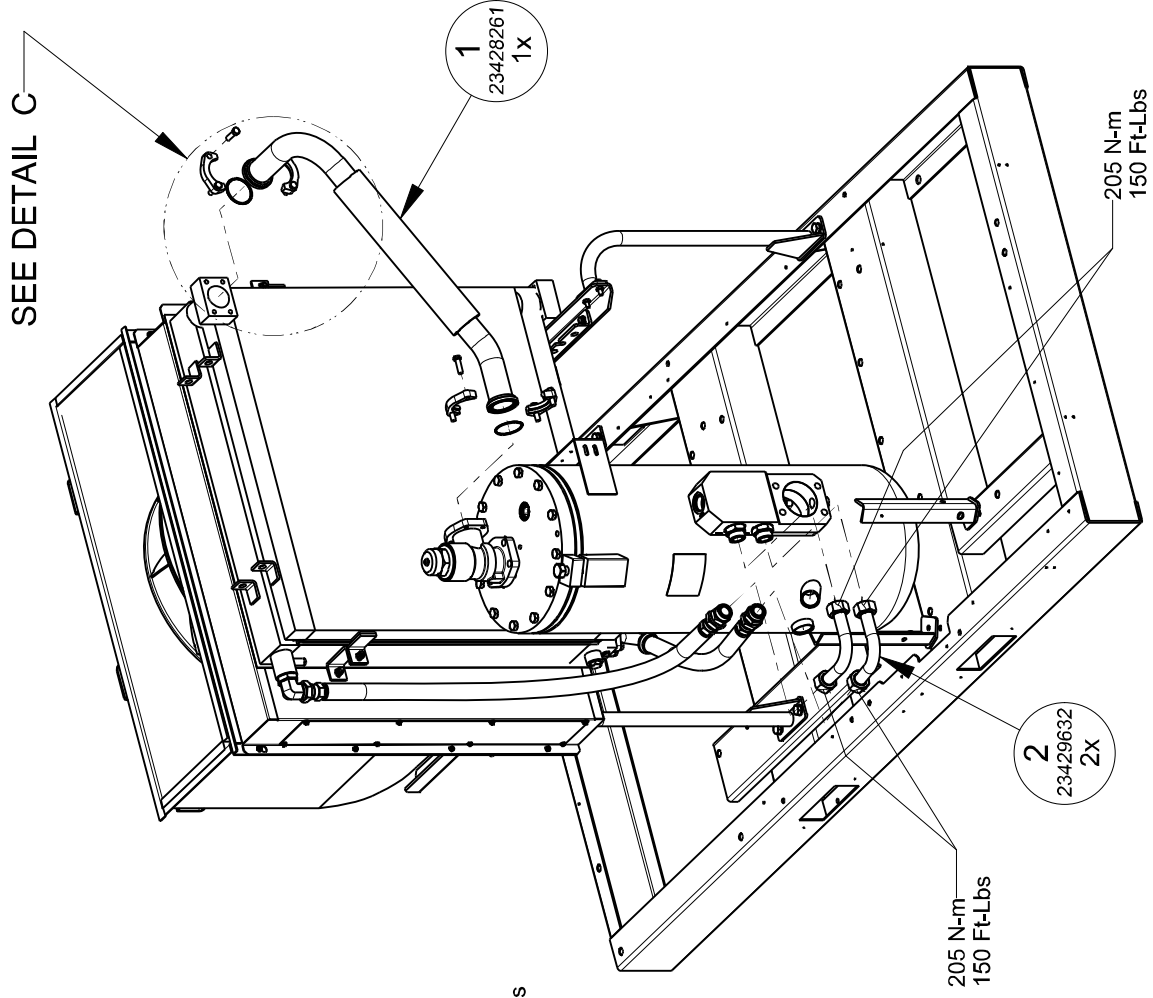
Title :

ASSEMBLY INST., COOLING (AIR COOLED)

REV **D**

Item	Part No.	Description	Qty.
1	23428261	TUBE, TANK TO AFT-CLR AIR COOLED	1
2	23429632	TUBE, HSTCV TO COOLER	2
3	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2
4	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4
5	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8

Description
ATTACH HOSES TO HSTV AND ATTACH TUBE FROM MPCV TO AFTERCOOLER.



DETAIL C
SCALE 0.150

205 N-m
150 Ft-Lbs

2
23429632
2X

5
53 N-m
39 Ft-Lbs
96702444
8X

4
95961496
4X

3
95028502
2X

1
23428261
1X



Part Number : **23463607**

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Title :

**ASSEMBLY INST., COOLING
(AIR COOLED)**

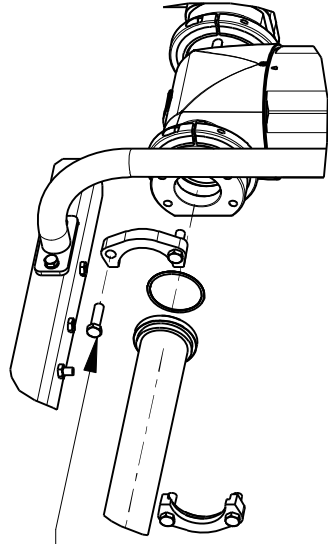
REV

D

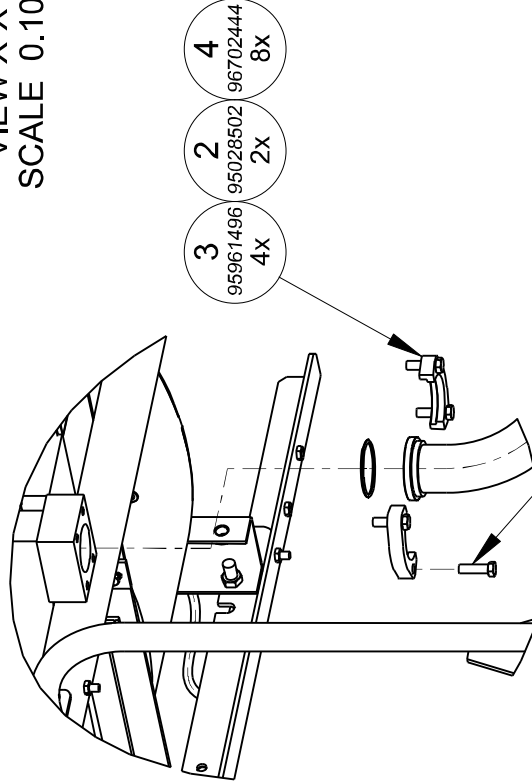
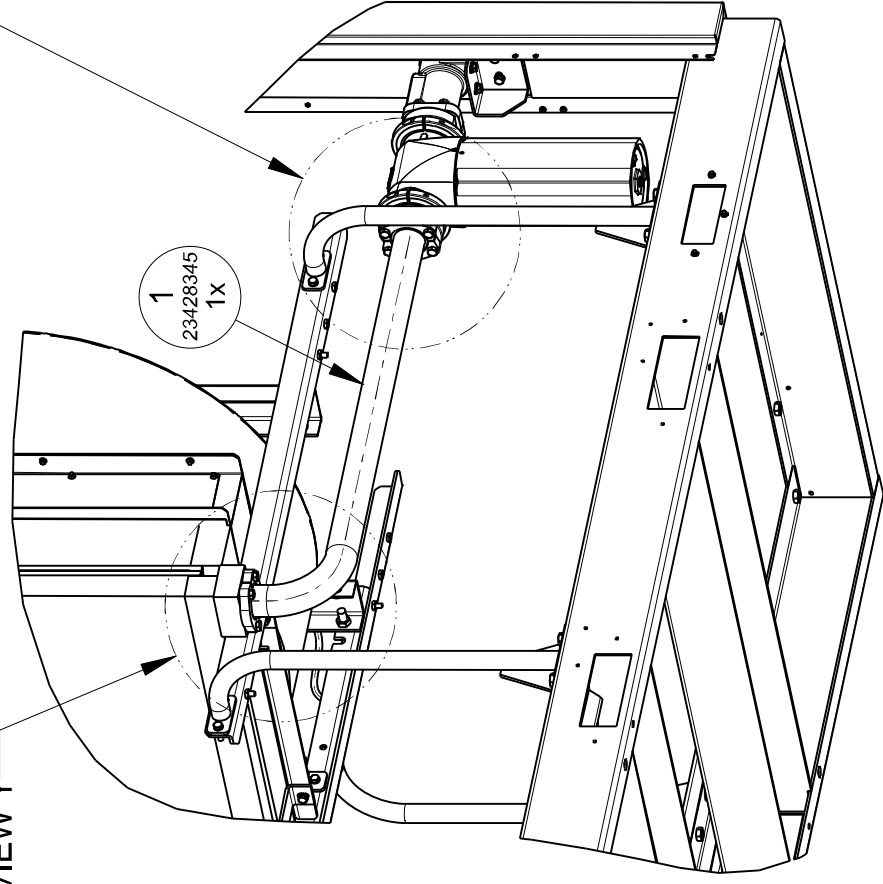
Item	Part No.	Description	Qty.	Description
1	23428345	TUBE, 2.50" AFTER COOLER OUTLET	1	ASSEMBLE DISCHARGE TUBE TO AFTERCOOLER AND MOISTURE SEPARATOR.
2	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2	
3	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4	
4	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8	

SEE EXPLODED VIEW X

SEE EXPLODED VIEW Y



**VIEW X-X
SCALE 0.100**



**VIEW Y-Y
SCALE 0.100**
53 N-m
39 Ft-Lbs



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Part Number : **23468788**

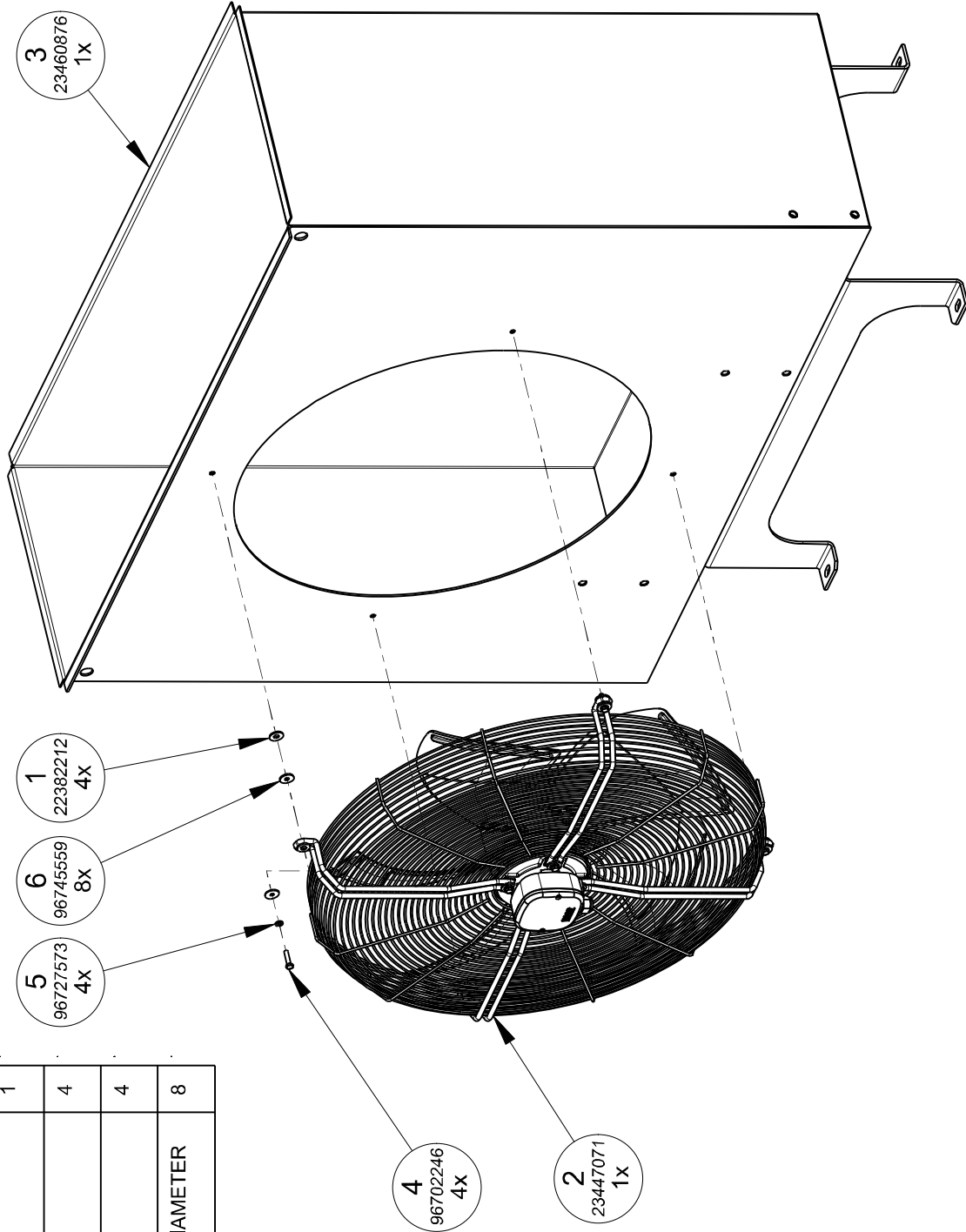
REV **C**

Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

Description
ASSEMBLE FAN TO BOX.

Item	Part No.	Description	Qty.
1	22382212	WASHER, RUBBER VIBRATION DAMPENING	4
2	23447071	FAN, 630mm 400V/50HZ 380V-460V/60HZ	1
3	23460876	SHROUD, FAN	1
4	96702246	SCREW, HEX HEAD M6-1.00 X 25.0 LONG	4
5	96727573	WASHER, SPRING LOCK, CURVED TYPE A, M6	4
6	96745559	WASHER, LARGE OUTSIDE DIAMETER PRODUCT GRADE C M6	8





Part Number : **23468788**

63

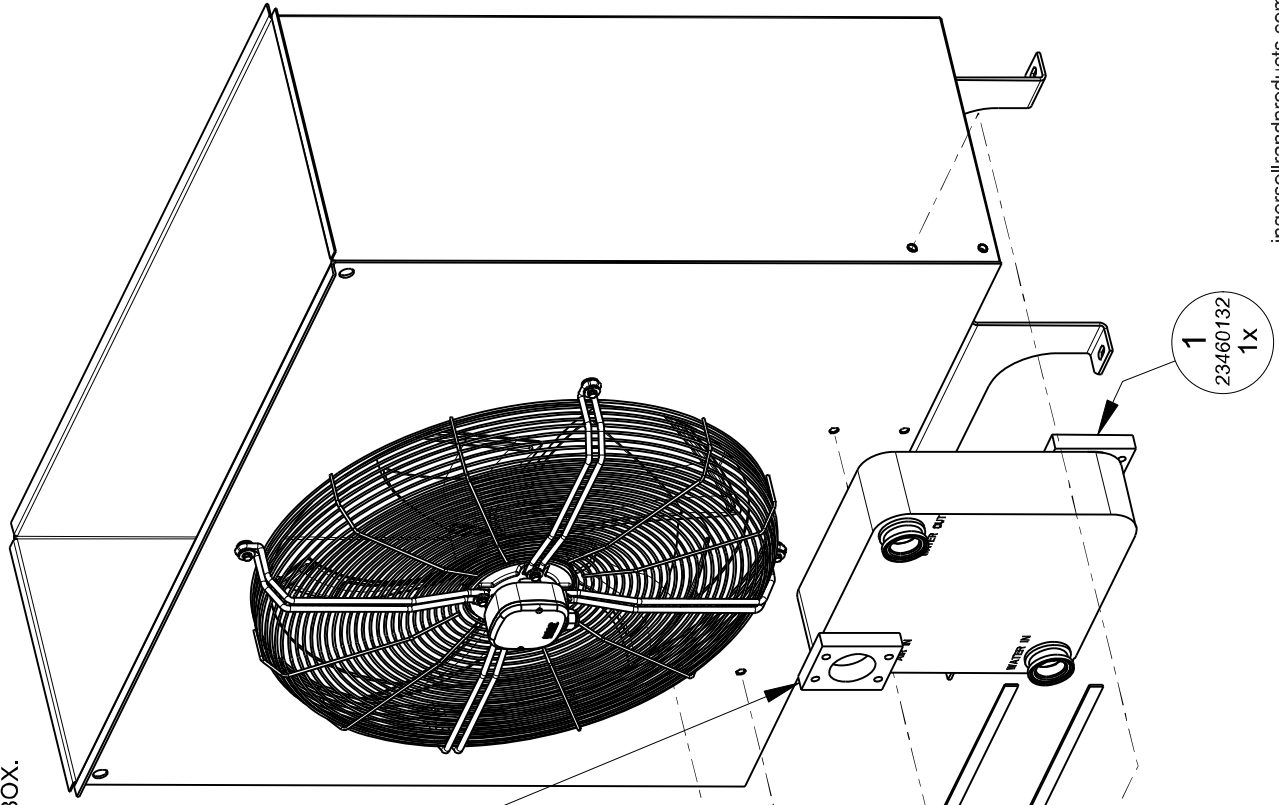
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV **C**

Item	Part No.	Description	Qty.
1	23460132	AFTERCooler, WATER-COOLED	1
2	23460140	OIL COOLER, WATER-COOLED	1
3	23462625	BRACKET, AFTERCooler WATER COOLED	1
4	23462633	BRACKET, OIL COOLER MOUNTING WATER COOLED	1
5	85038412	GASKET, .125 INCH X .75 INCH	A/R
6	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	8
7	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	8

Description
ASSEMBLE AIR AND OIL COOLERS TO FAN BOX.



2
23460140
1X

5
85038412
A/Rx

4
23462633
1X

7
96712096
8X

6
96701479
8X

3
23462625
1X

1
23460132
1X



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Part Number :

23468788

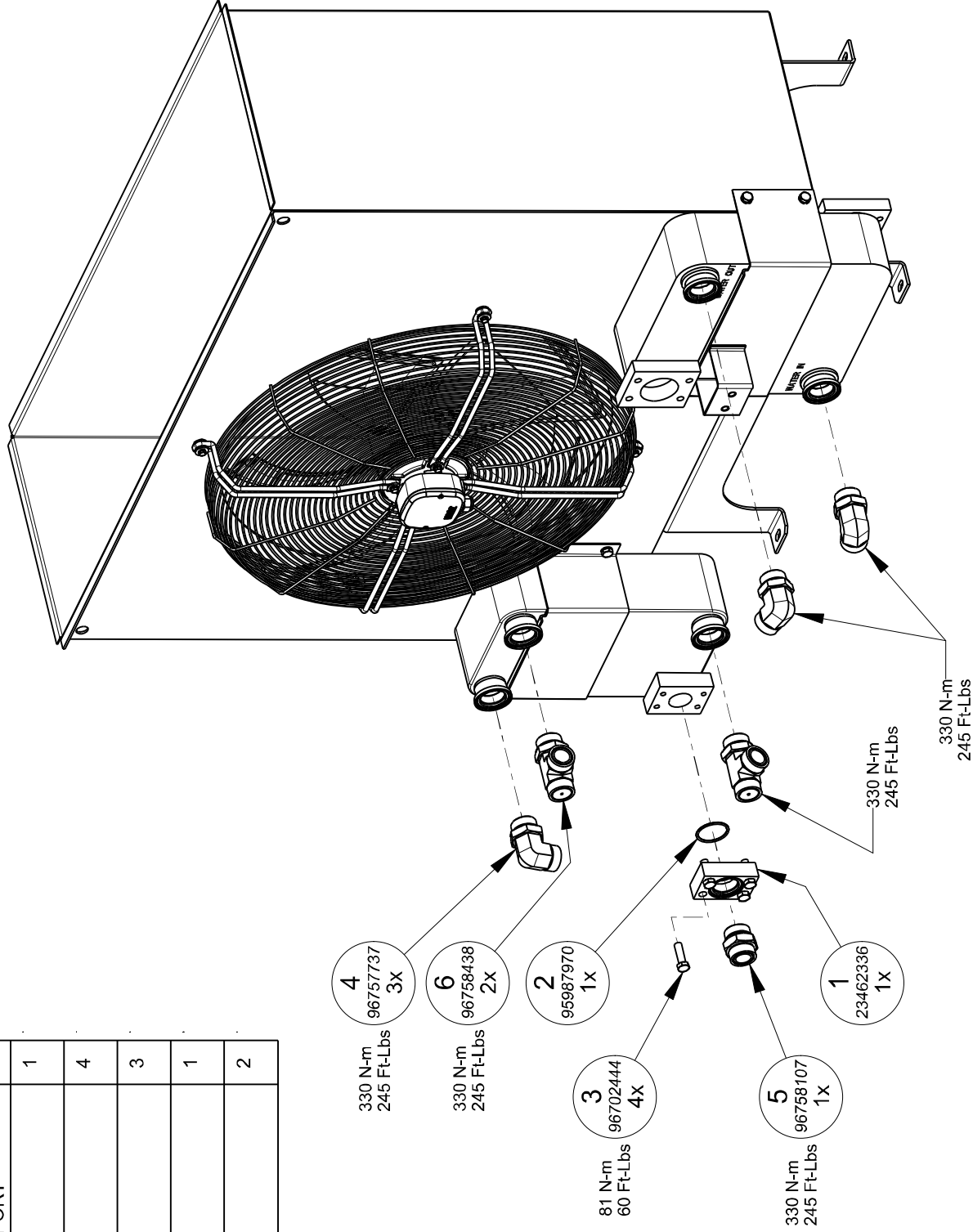
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV
C

Item	Part No.	Description	Qty.
1	23462336	ADAPTER, ISO 6162 -1 FHG X 38 WITH ISO 6149-1 M42 X 2 PORT	1
2	95987970	ORING, STANDARD -225 1.875 ID X .125 WIDTH	1
3	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	4
4	96757737	ELBOW, 90 1.25 TUBE X M42	3
5	96758107	CONNECTOR 1.25 TUBE X M42	1
6	96758438	TEE, 1.25 1.25 X M42 X 1.25	2

Description
ASSEMBLE FITTINGS TO COOLERS.





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Part Number : **23468788**

65

Title :

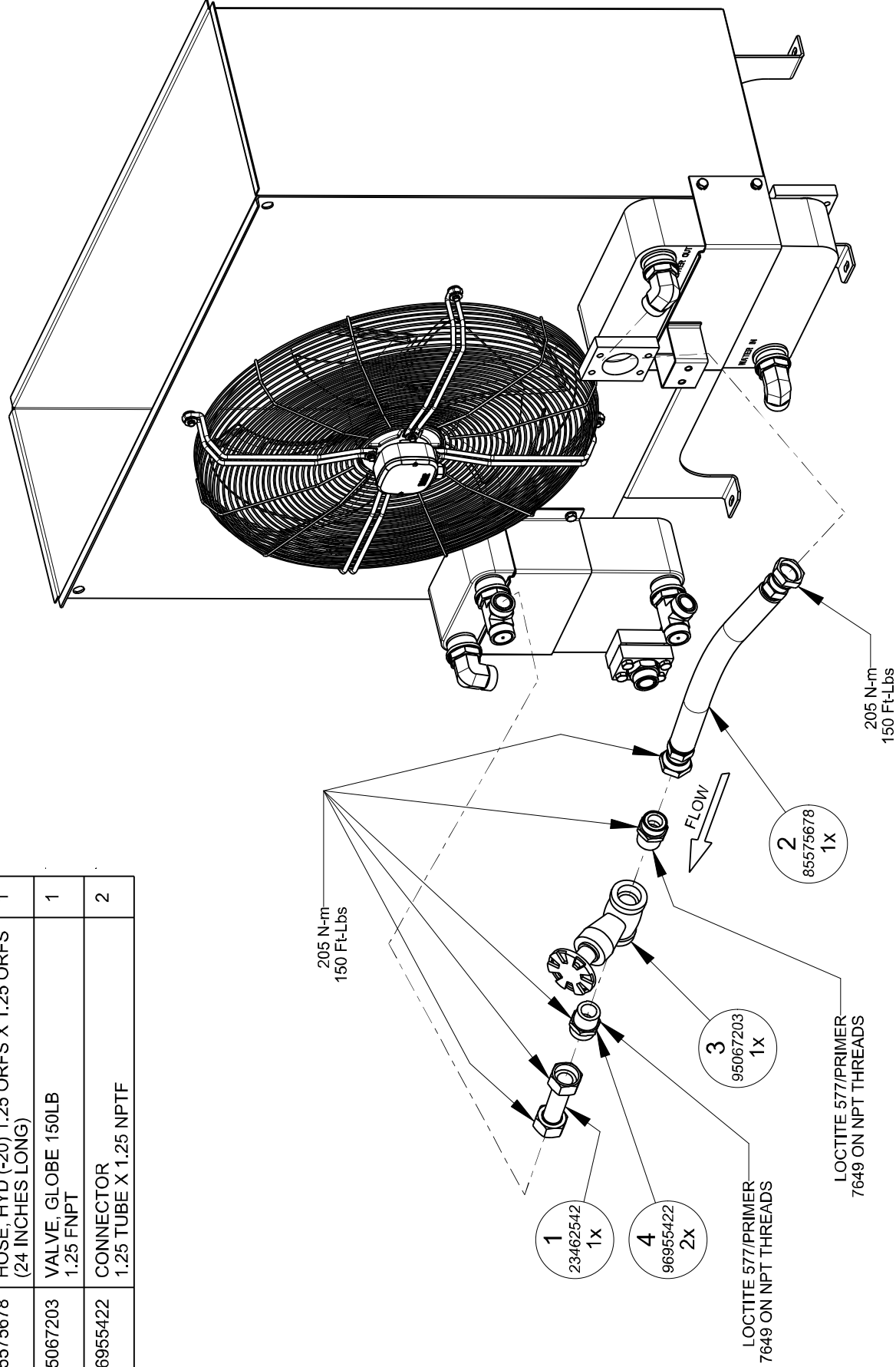
**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV **C**

Item	Part No.	Description	Qty.
1	23462542	TUBE, TRIM VALVE OUT WATER COOLED	1
2	85575678	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (24 INCHES LONG)	1
3	95067203	VALVE, GLOBE 150LB 1.25 FNPT	1
4	96955422	CONNECTOR 1.25 TUBE X 1.25 NPTF	2

Description

ASSEMBLE WATER OUT HOSES AND VALVE TO COOLERS.



- 1 23462542 1X
- 2 85575678 1X
- 3 95067203 1X
- 4 96955422 2X

LOCTITE 577/PRIMER
7649 ON NPT THREADS

LOCTITE 577/PRIMER
7649 ON NPT THREADS



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Part Number :

23468788

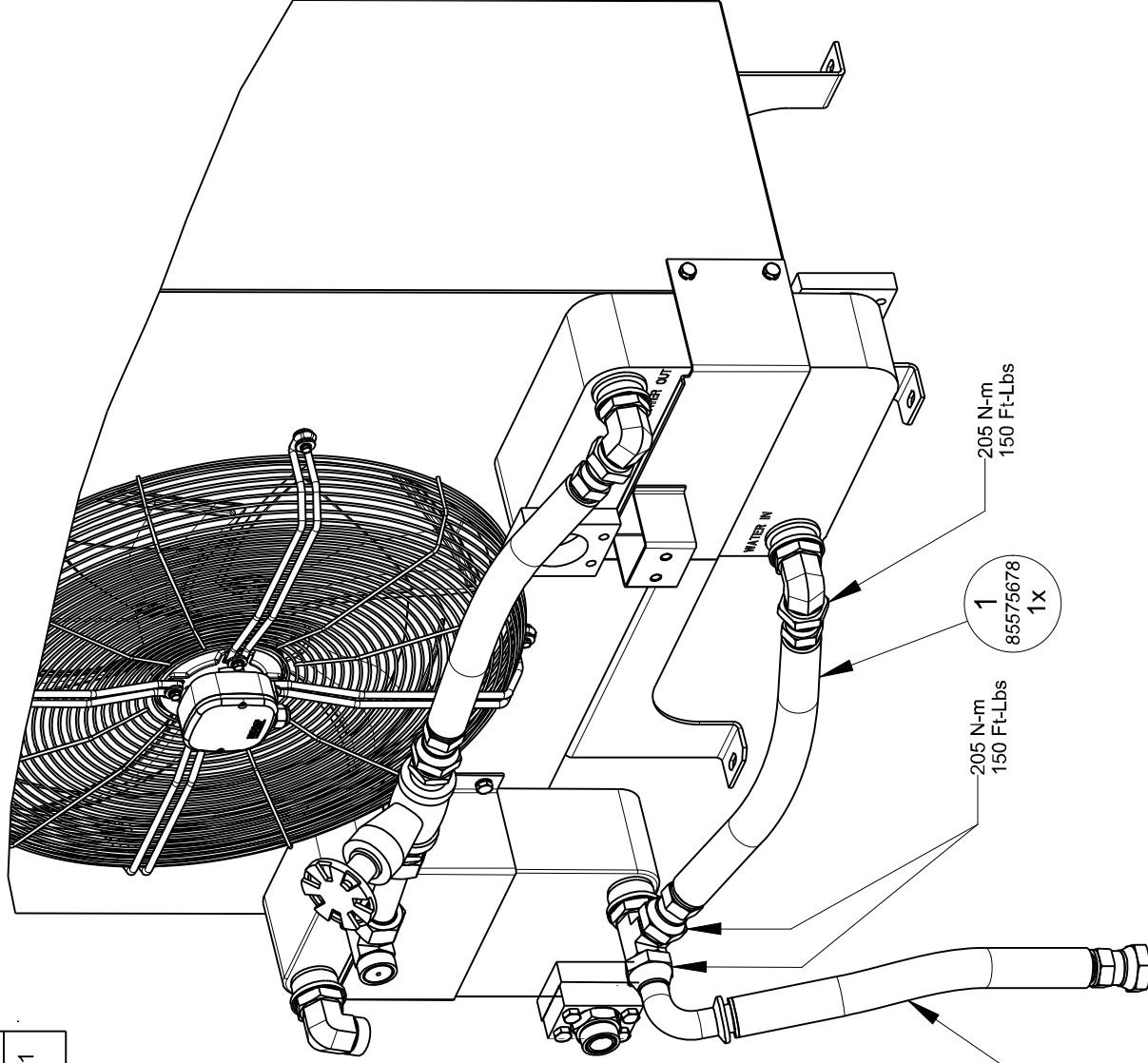
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV
C

Item	Part No.	Description	Qty.
1	85575678	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (24 INCHES LONG)	1
2	85575736	HOSE, HYD (-20) 90 DEG 1.25 ORFS X STR 1.25 ORFS (22 INCHES LONG)	1

Description
ASSEMBLE WATER IN HOSES.





Part Number : 23468788

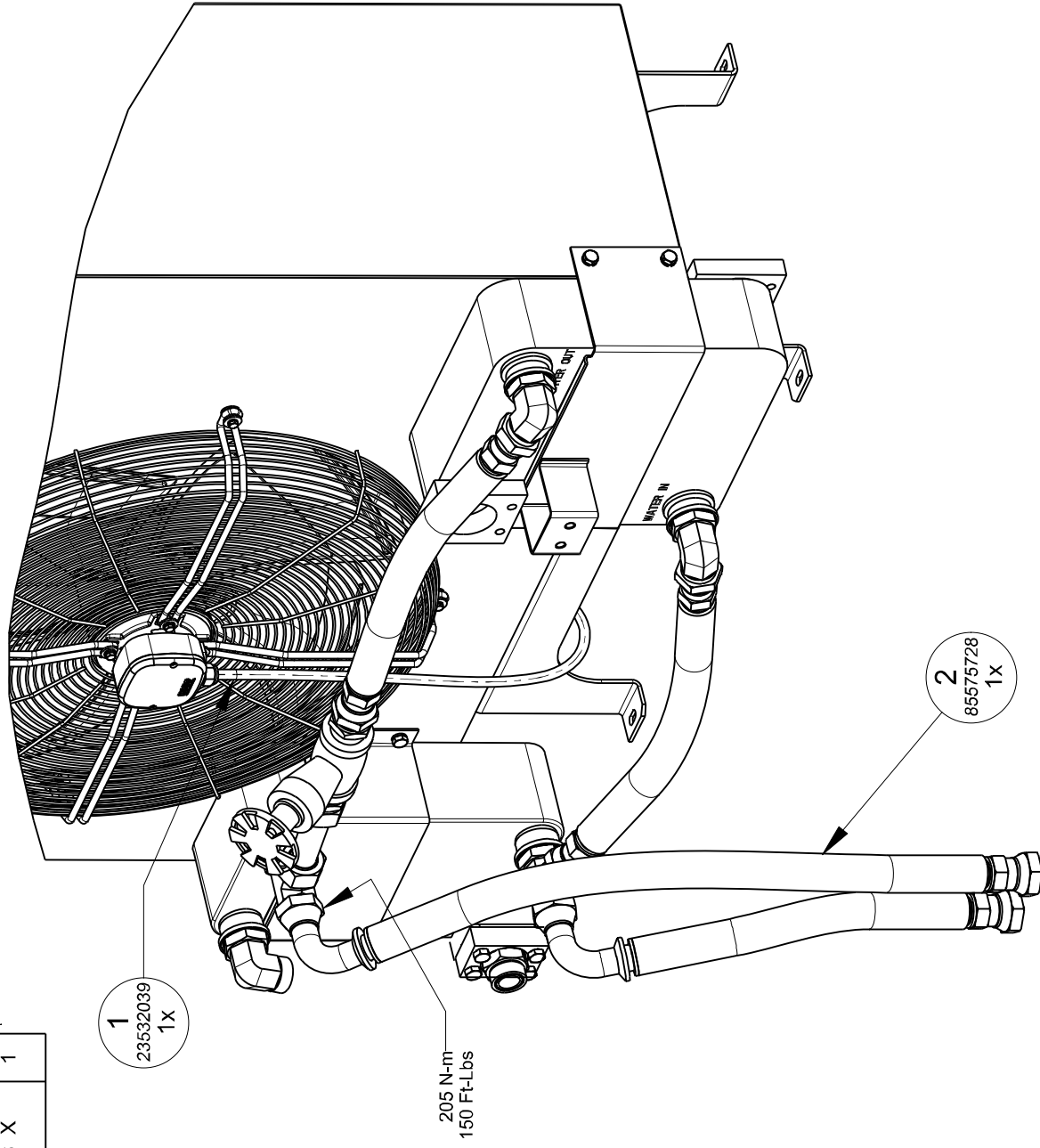
67

Title :

ASSEMBLY INST., COOLING (WATER COOLED)

REV C

Item	Part No.	Description	Qty.	Description
1	23532039	CABLE, ASSEMBLY 14 AWG X 1544 FAN MOTOR	1	ASSEMBLY WATER OUT HOSE TO FITTING.
2	85575728	HOSE, HYD (-20) 90 DEG 1.25 ORFS X STR 1.25 ORFS (34 INCHES LONG)	1	





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Part Number :

23468788

Title :

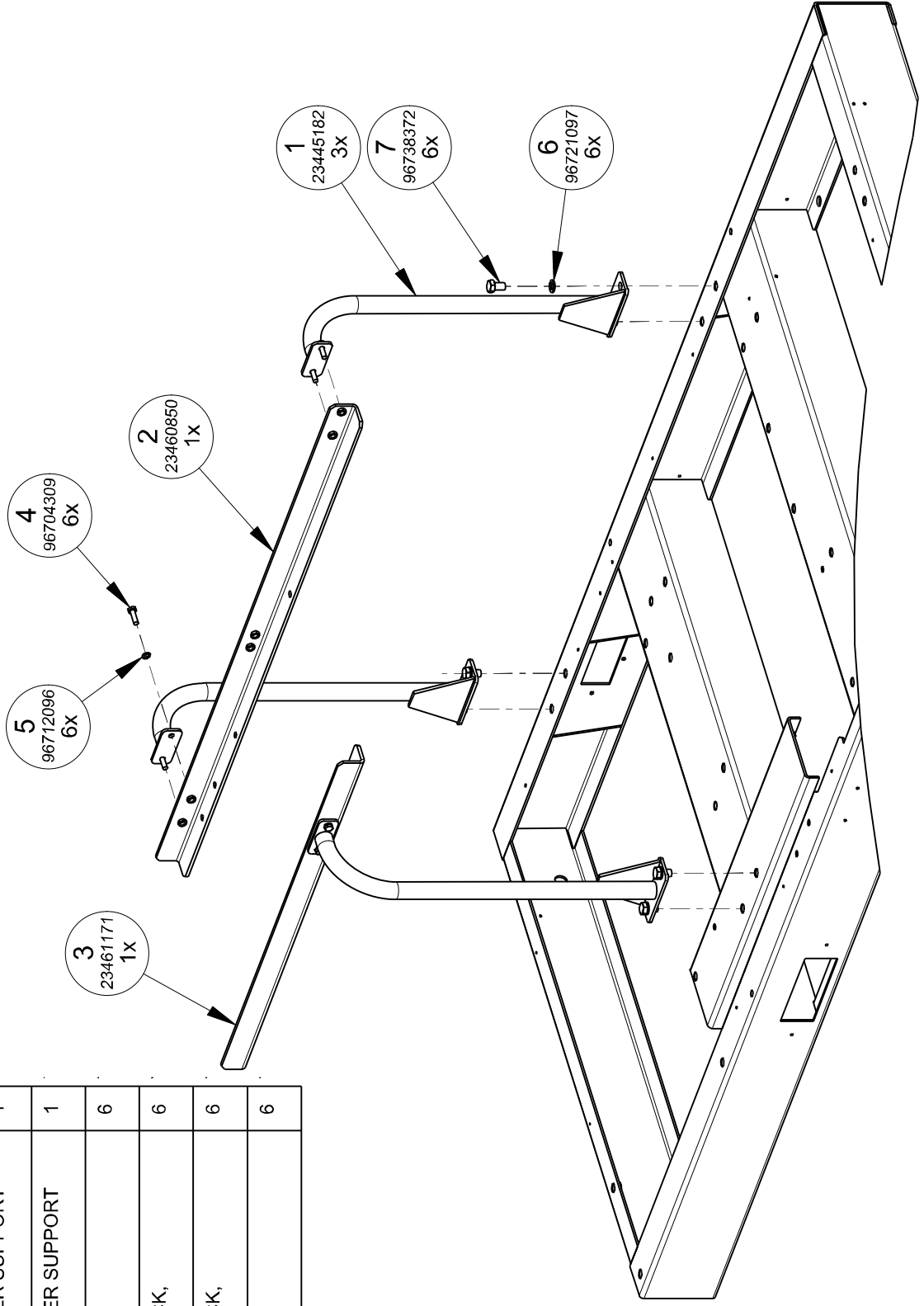
**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV
C

Item	Part No.	Description	Qty.
1	23445182	LEG, COOLER / BLOWER SUPPORT	3
2	23460850	ANGLE, WATER COOLER SUPPORT	1
3	23461171	ANGLE, WATER COOLER SUPPORT	1
4	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	6
5	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	6
6	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	6
7	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	6

Description

ASSEMBLE LEGS AND SUPPORT ANGLES TO BASE.





Part Number : 23468788

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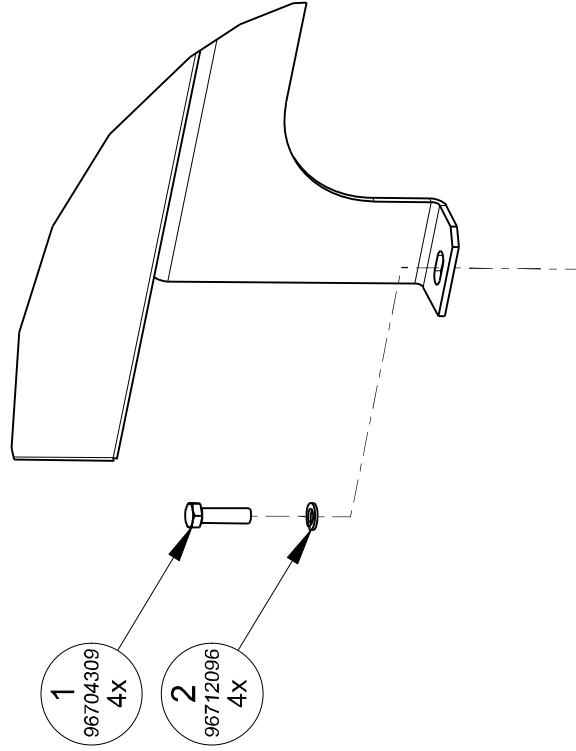
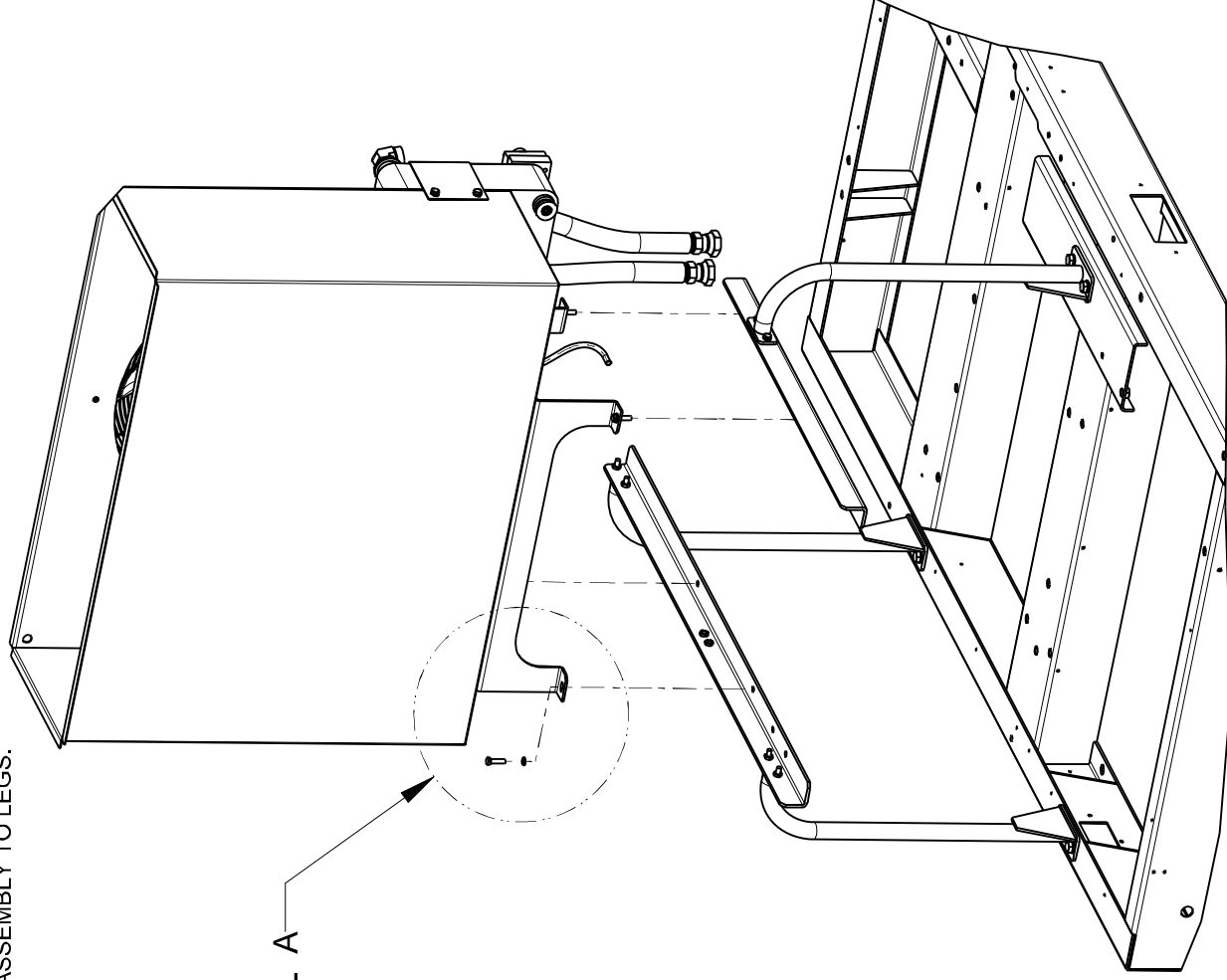
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV **C**

Item	Part No.	Description	Qty.	Description
1	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	4	ASSEMBLE COOLER/FAN ASSEMBLY TO LEGS.
2	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4	

ASSEMBLE COOLER/FAN ASSEMBLY TO LEGS.





Part Number : 23468788

70

Title :

ASSEMBLY INST., COOLING (WATER COOLED)

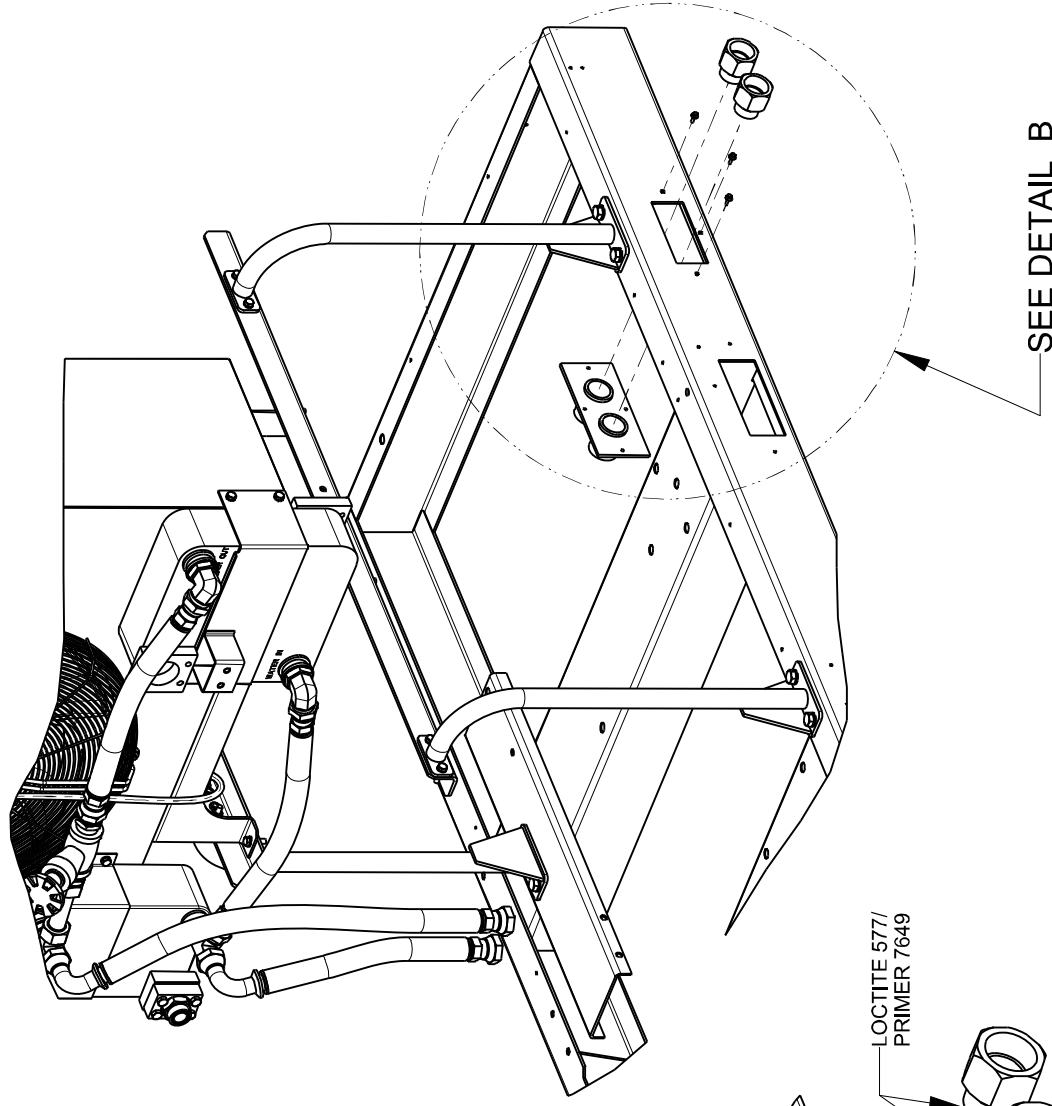
REV **C**

Description
ASSEMBLE CUSTOMER WATER CONNECTION AND ADAPTERS (AS NEEDED) TO BASE.

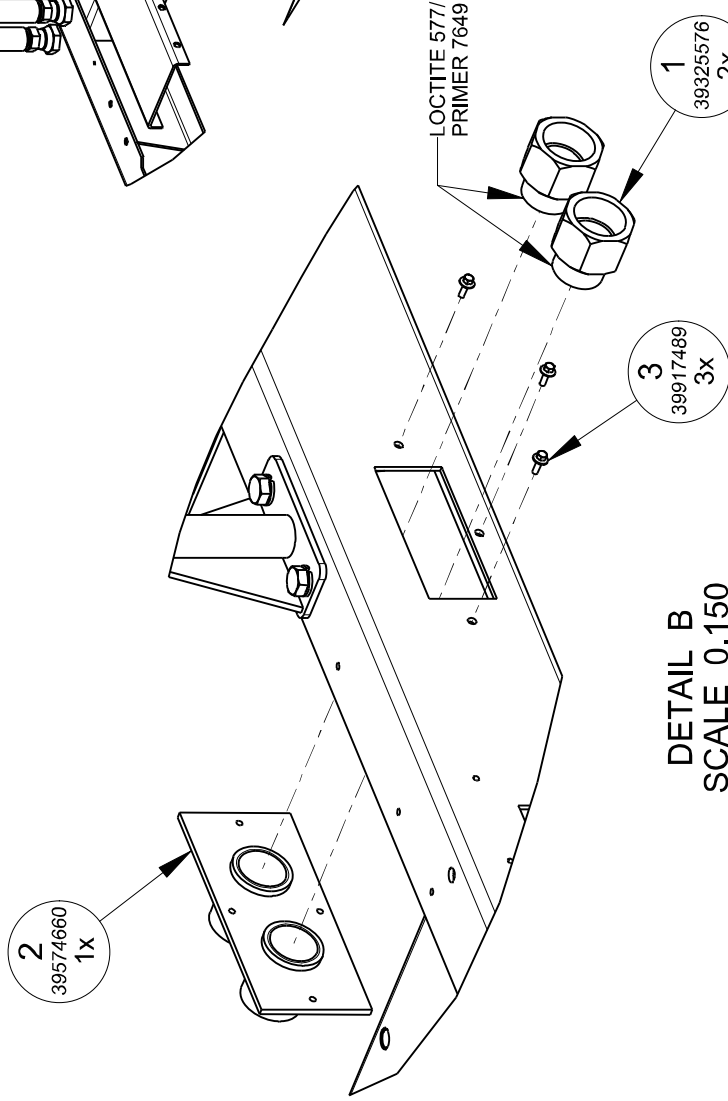
Item	Part No.	Description	Qty.
1	39325576	ADAPTER, 1.50 INCH NPT MALE X 1.50 BSPT FEMALE	2
2	39574660	PLATE, COUPLING WATERCOOLED	1
3	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	3

NOTE:

1. ADAPTERS ONLY USED FOR BSPT CUSTOMER CONNECTION OPTION.



SEE DETAIL B



DETAIL B
SCALE 0.150

SEE NOTE



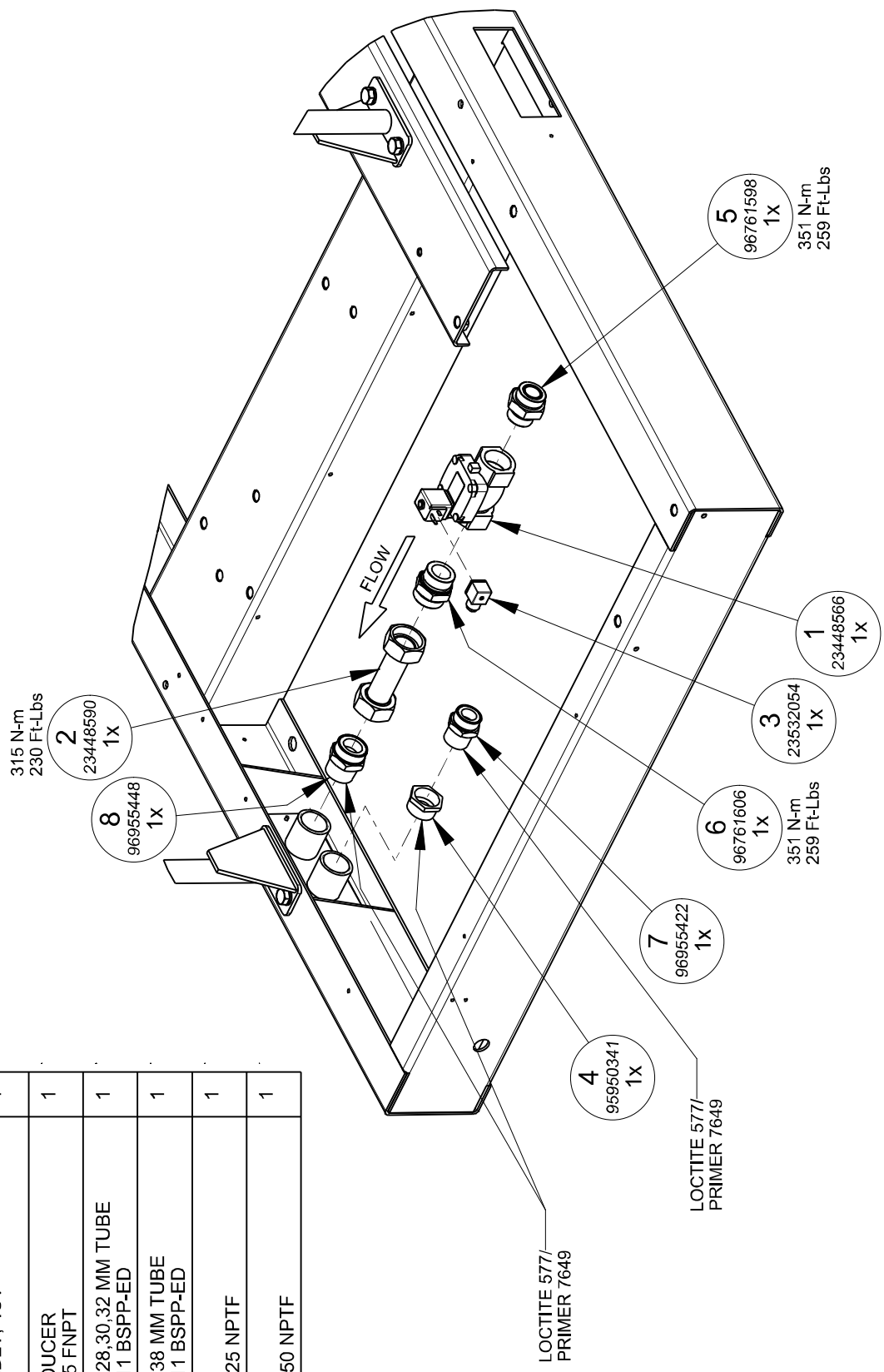
Part Number : **23468788**

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REV **C**
**ASSEMBLY INST., COOLING
 (WATER COOLED)**

Description
 ASSEMBLE FITTINGS AND WATER STOP VALVE.

Item	Part No.	Description	Qty.
1	23448566	VALVE, SOLENOID G 1.5 2 WAY NC 110/120V 50/60HZ	1
2	23448590	TUBE, 1.5 WATER OUT TO BASE	1
3	23532054	CABLE ASSEMBLY, 4SV	1
4	95950341	BUSHING REDUCER 1.50 NPT X 1.25 FNPT	1
5	96761598	CONNECTOR, 28,30,32 MM TUBE ORFS X 1-1/2-11 BSPP-ED	1
6	96761606	CONNECTOR, 38 MM TUBE ORFS X 1-1/2-11 BSPP-ED	1
7	96955422	CONNECTOR 1.25 TUBE X 1.25 NPTF	1
8	96955448	CONNECTOR 1.50 TUBE X 1.50 NPTF	1





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Part Number :

23468788

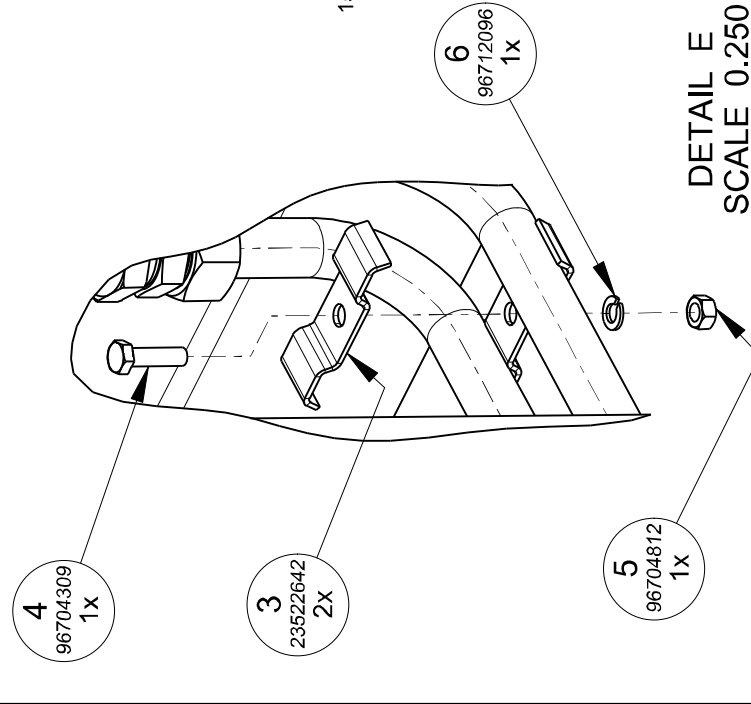
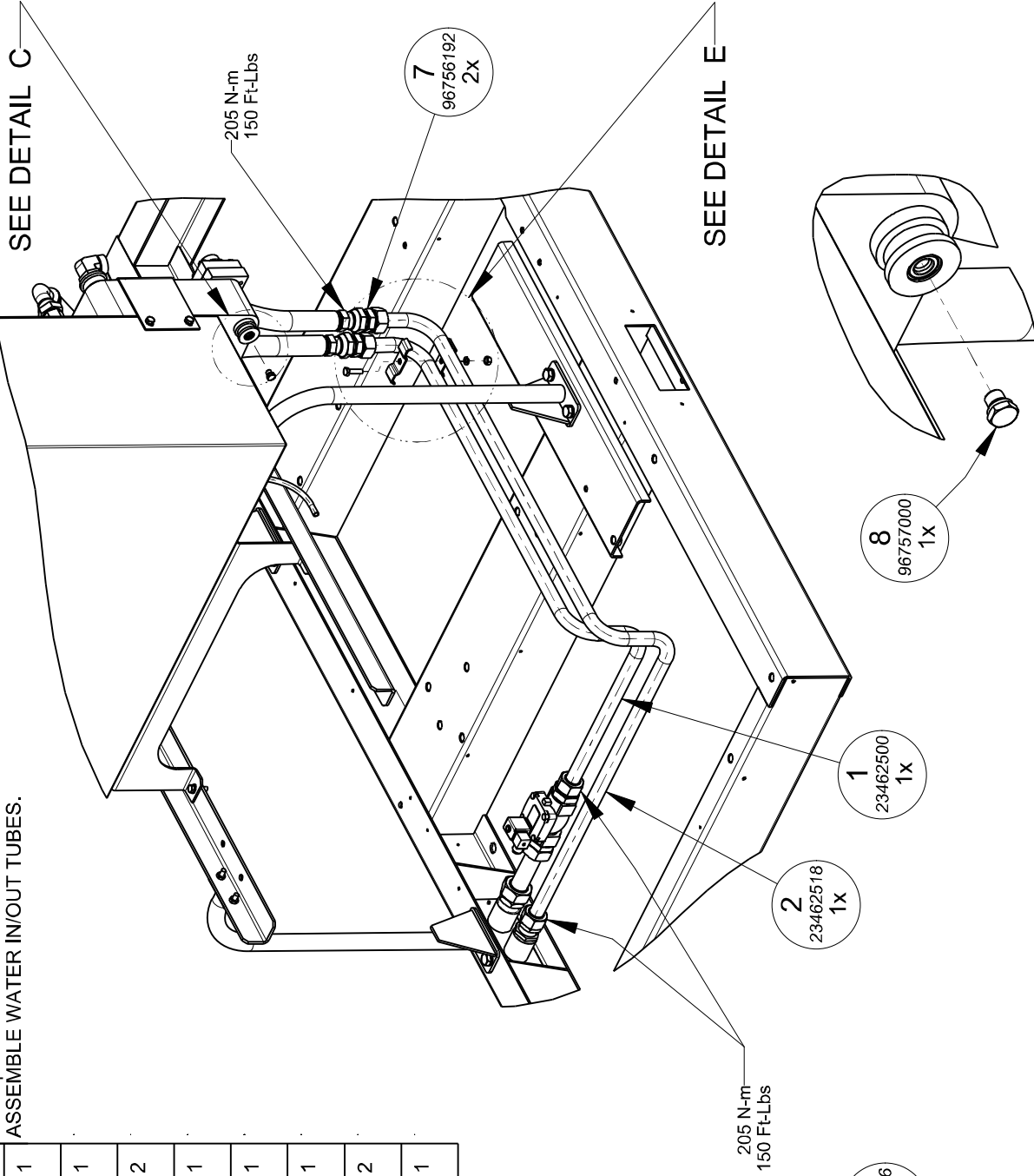
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV **C**

Item	Part No.	Description	Qty.
1	23462500	TUBE, WATER OUT TO BASE WATER COOLED	1
2	23462518	TUBE, WATER IN WATER COOLED	1
3	23522642	CLAMP, 1.25 INCH TUBE	2
4	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	1
5	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	1
6	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	1
7	96756192	UNION, STRAIGHT 1.25	2
8	96757000	PLUG, HEX HEAD M12	1

Description
ASSEMBLE WATER IN/OUT TUBES.



DETAIL C
SCALE 0.250



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Part Number :

23468788

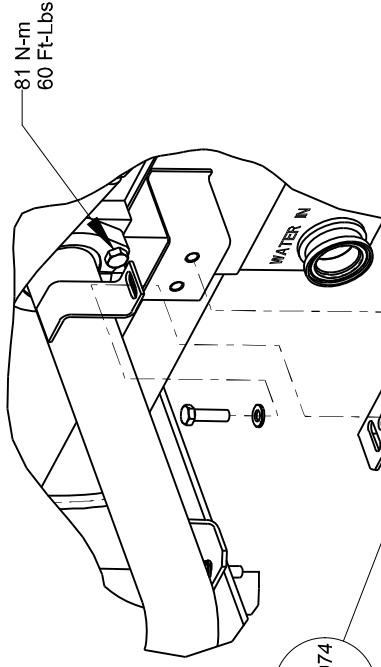
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV
C

Item	Part No.	Description	Qty.
1	23462351	TUBE, TANK TO AFT-CLR WATER COOLED	1
2	23540974	SUPPORT, PIPE SEP TANK TO AFT-CLR	1
3	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2
4	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4
5	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8
6	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	3
7	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	1
8	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	3
9	96714399	WASHER, PRODUCT GRADE A M10	4

Description
ASSEMBLE AIR PIPE FROM MPCV TO AIR COOLER.



81 N-m
60 Ft-Lbs

VIEW Y - Y
SCALE 0.150

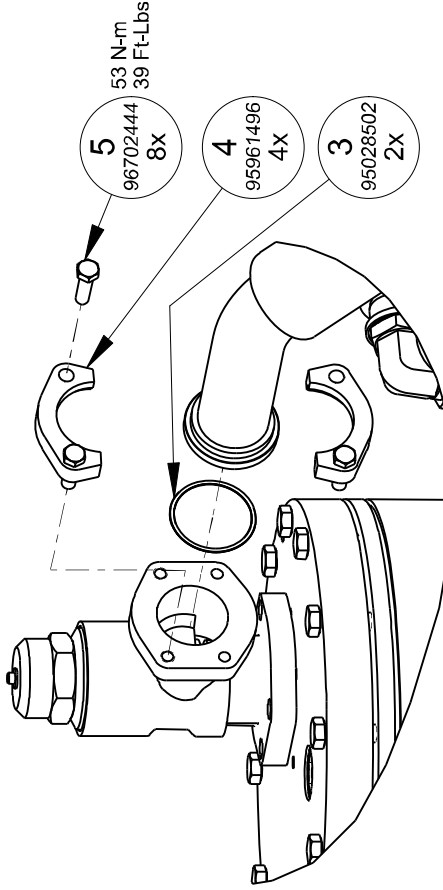
2
23540974
1X

6
96704309
3X

9
96714399
4X

8
96712096
3X

7
96704812
1X



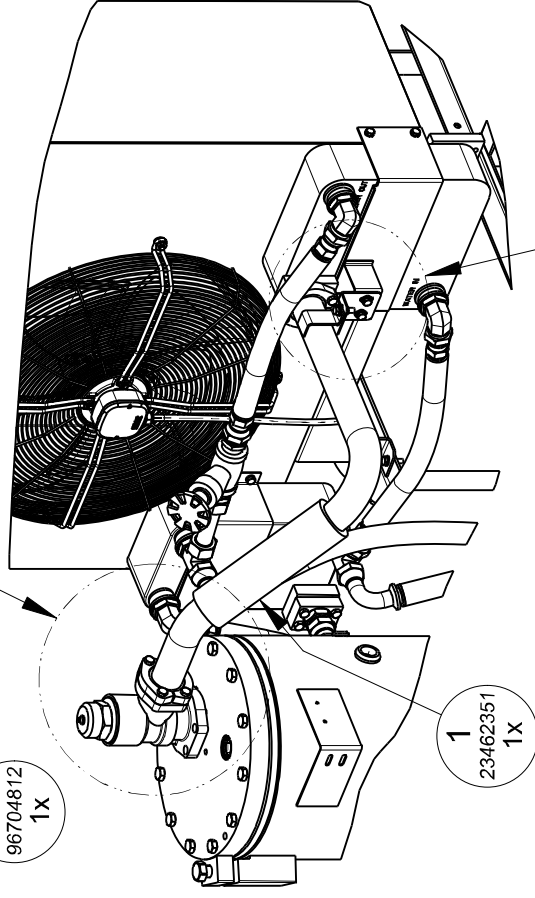
5
96702444
8X

4
95961496
4X

3
95028502
2X

53 N-m
39 Ft-Lbs

SEE EXPLODED VIEW X



1
23462351
1X

VIEW X - X
SCALE 0.150

SEE EXPLODED VIEW Y



Part Number : **23468788**

75

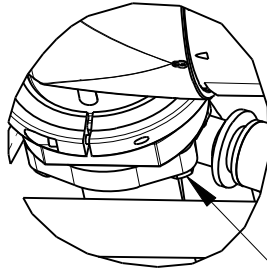
Title :

**ASSEMBLY INST., COOLING
(WATER COOLED)**

REV **C**

Item	Part No.	Description	Qty.
1	23462039	TUBE, COOLER DISCHARGE WATER COOLED	1
2	23540974	SUPPORT, PIPE SEP TANK TO AFT-CLR	1
3	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2
4	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4
5	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8
6	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	3
7	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	1
8	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	3
9	96714399	WASHER, PRODUCT GRADE A M10	4

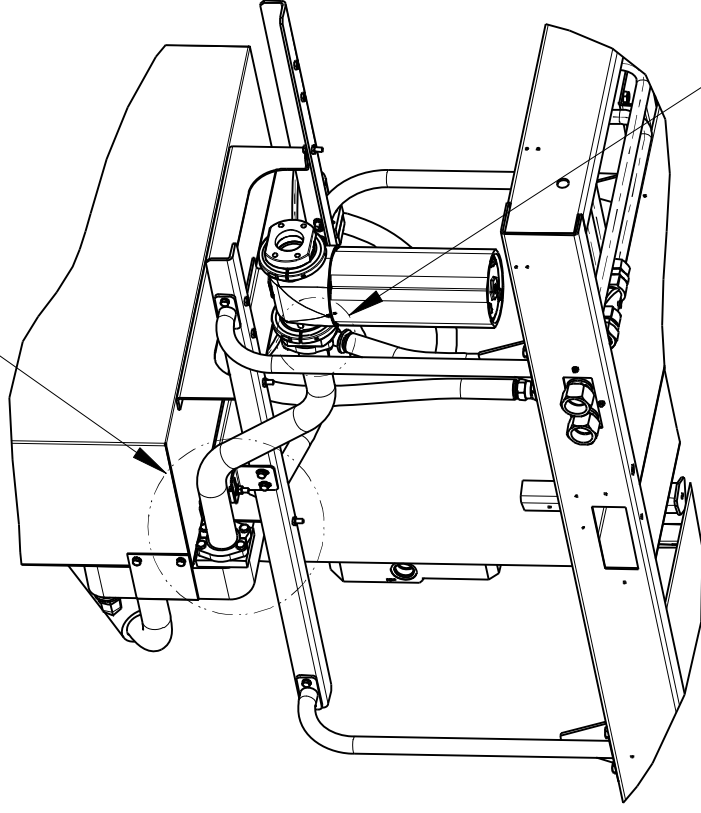
Description
ASSEMBLY AIR DISCHARGE PIPE TO AIR COOLER AND MOISTURE SEPARATOR.



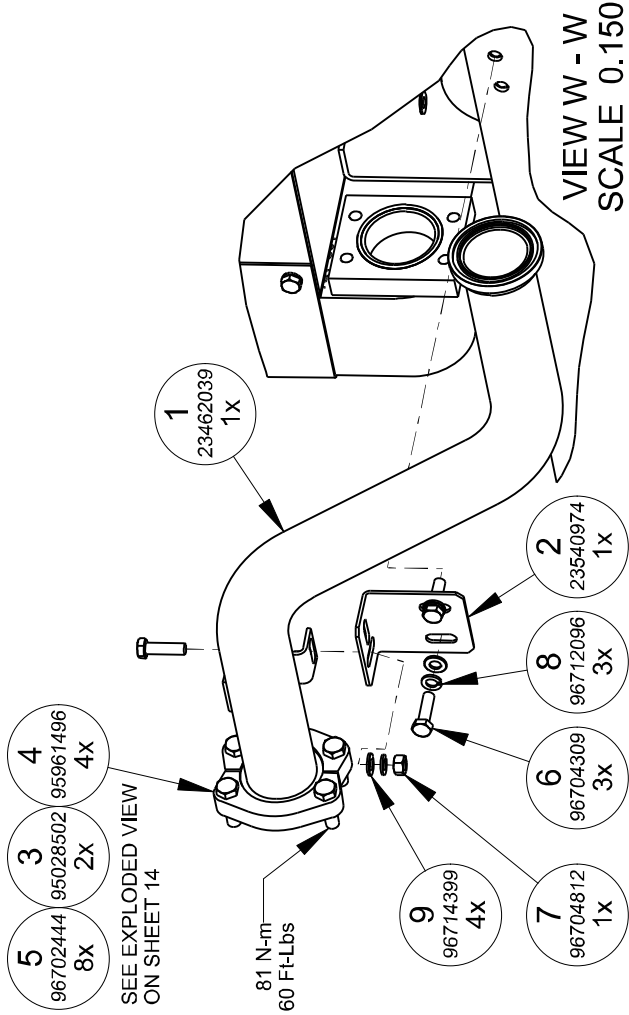
53 N·m
39 Ft-Lbs

DETAIL D
SCALE 0.200

SEE EXPLODED VIEW W



SEE DETAIL D



VIEW W - W
SCALE 0.150



Part Number :

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23478712

Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV

B

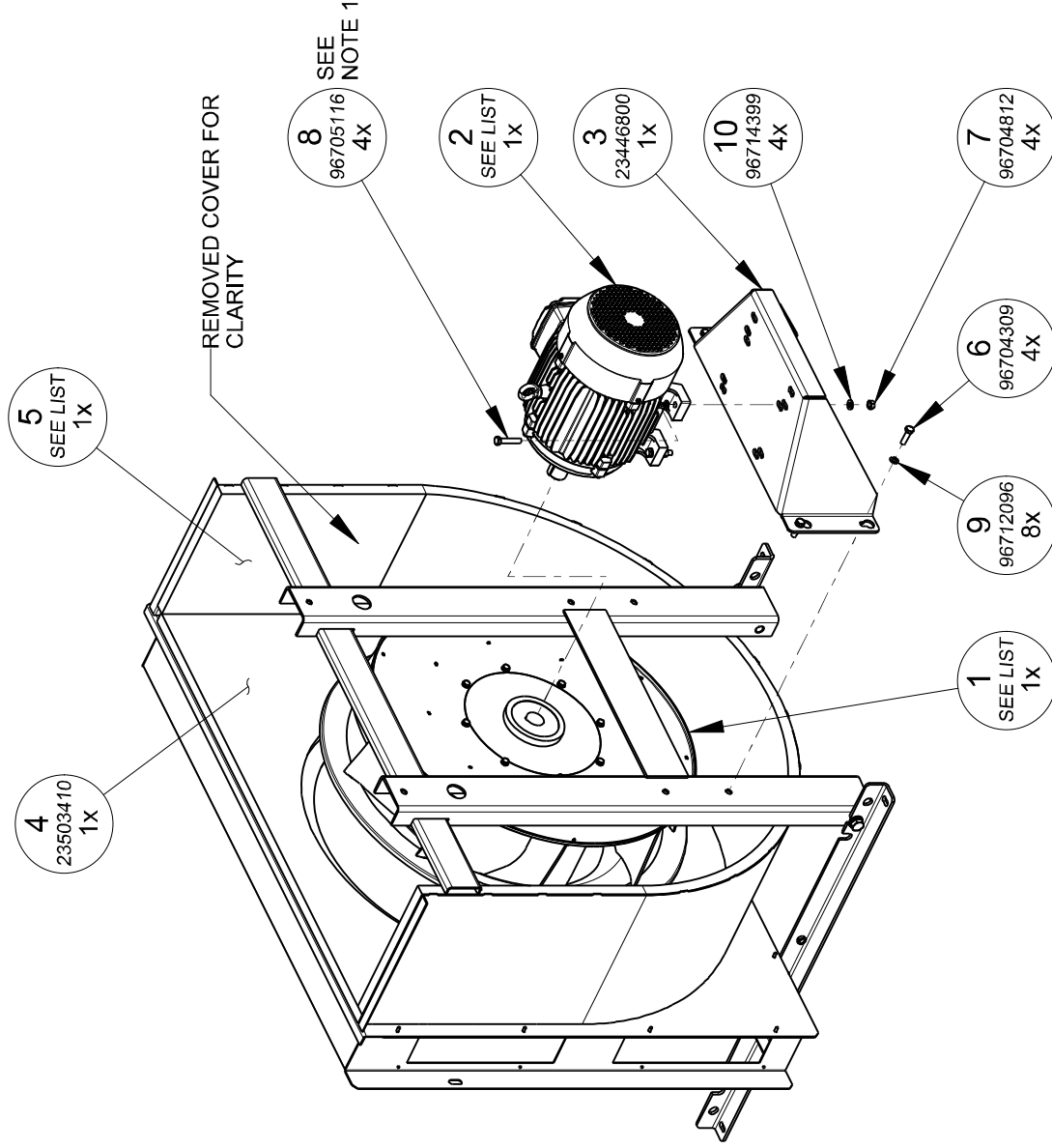
Item	Part No.	Description	Qty.
1	SEE LIST	BLOWER, R62A2 710x160	1
2	SEE LIST	MOTOR, 4KW 4600V/3/60HZ TEFC	1
3	23446800	SUPPORT, BLOWER MOTOR	1
4	23503410	FOAM, BLOWER SHROUD	1
5	SEE LIST	FOAM	1
6	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	4
7	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	4
8	96705116	SCREW, HEX HEAD M10-1.50 X 50.0 LONG	4
9	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	8
10	96714399	WASHER, PRODUCT GRADE A M10	4

NOTES:

1. CAN INSTALL BOLTS FROM TOP AS SHOWN
OR FROM THE BOTTOM IF NEEDED.

ALTERNATE PARTS LIST		
ITEM	PART NO.	DESCRIPTION
1	23413818	BLOWER - 60 HZ
1	23413800	BLOWER - 50 HZ
2	23423635	MOTOR - 380V 60 HZ
2	23423643	MOTOR - 440V 60 HZ
2	23423650	MOTOR - 460V 60 HZ
2	23423668	MOTOR - 575V 60 HZ
2	23423627	MOTOR - 400V 50 HZ
5	23503436	60 HZ HOUSING
5	23503428	50 HZ HOUSING

Description
ASSEMBLE BLOWER AND BLOWER MOTOR.





Part Number : **23478712**

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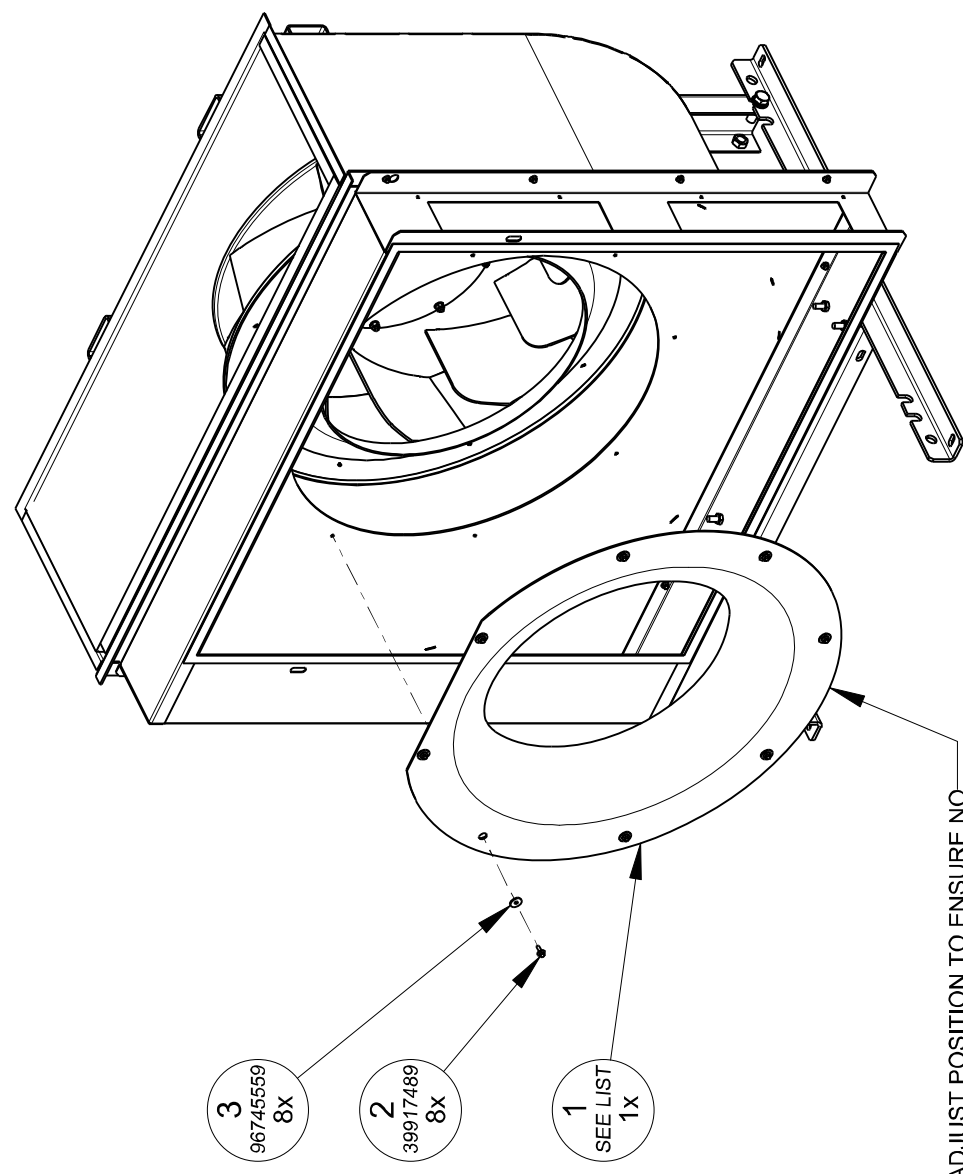
REV **B**

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

Title :

Item	Part No.	Description	Qty.
1	SEE LIST	CONE, INLET BLOWER	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	8
3	96745559	WASHER, LARGE OUTSIDE DIAMETER PRODUCT GRADE C M6	8

Description
ASSEMBLE BLOWER CONE TO BLOWER HOUSING.



3
96745559
8X

2
39917489
8X

1
SEE LIST
1X

ADJUST POSITION TO ENSURE NO
CONTACT WITH BLOWER WHEEL

NOTE:

QUANTITIES OF ITEMS 2 (39917489) AND ITEM 3 (96745559)
TO USE ON THE 50 HERTZ PACKAGE IS 6.

ALTERNATE PARTS LIST	
ITEM	DESCRIPTION
1	23417165 INLET CONE - 60 Hz
1	23391352 INLET CONE - 50 Hz



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Part Number :

23478712

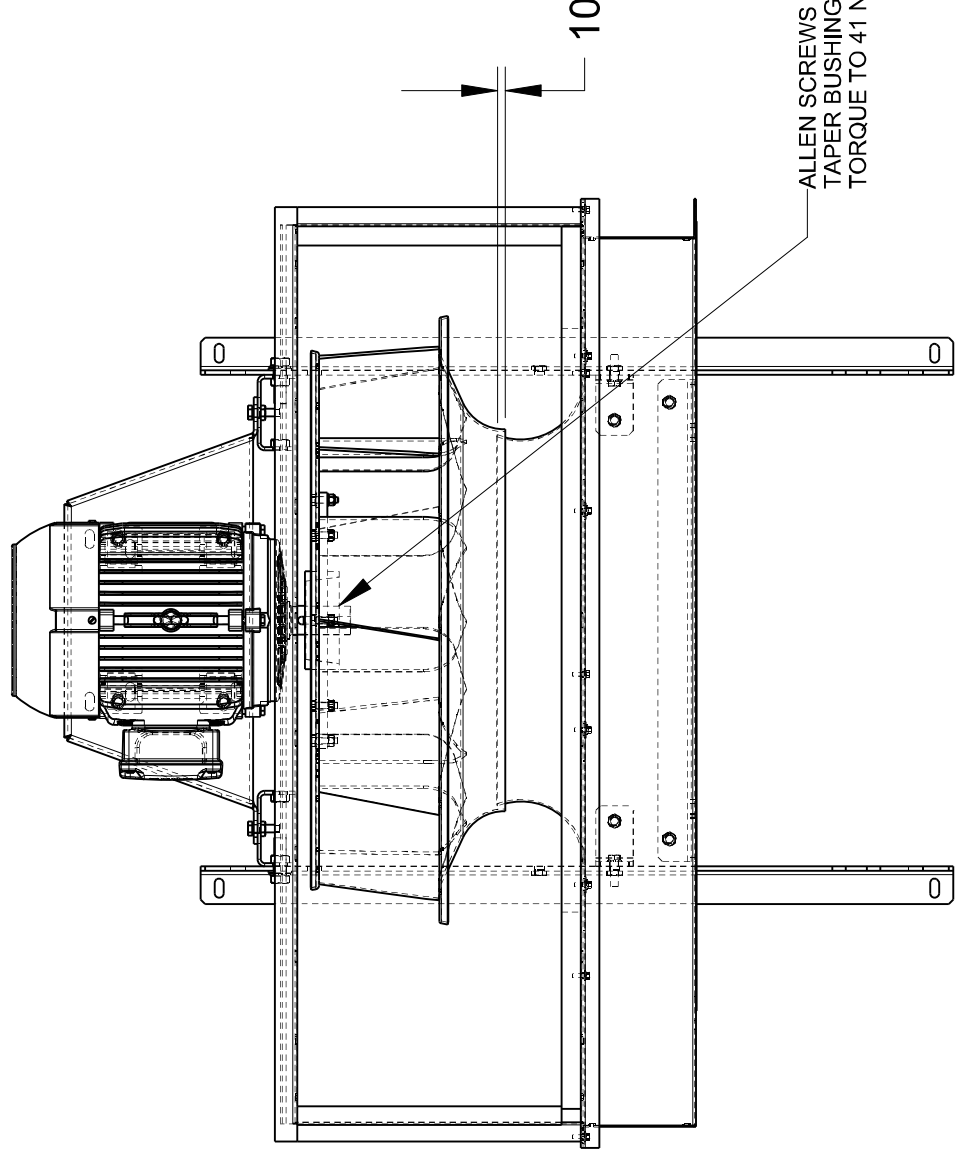
Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV

B

Item	Part No.	Description	Qty.	Description
				ASSEMBLE BLOWER AND BLOWER MOTOR.





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Part Number : **23478712**

REV **B**

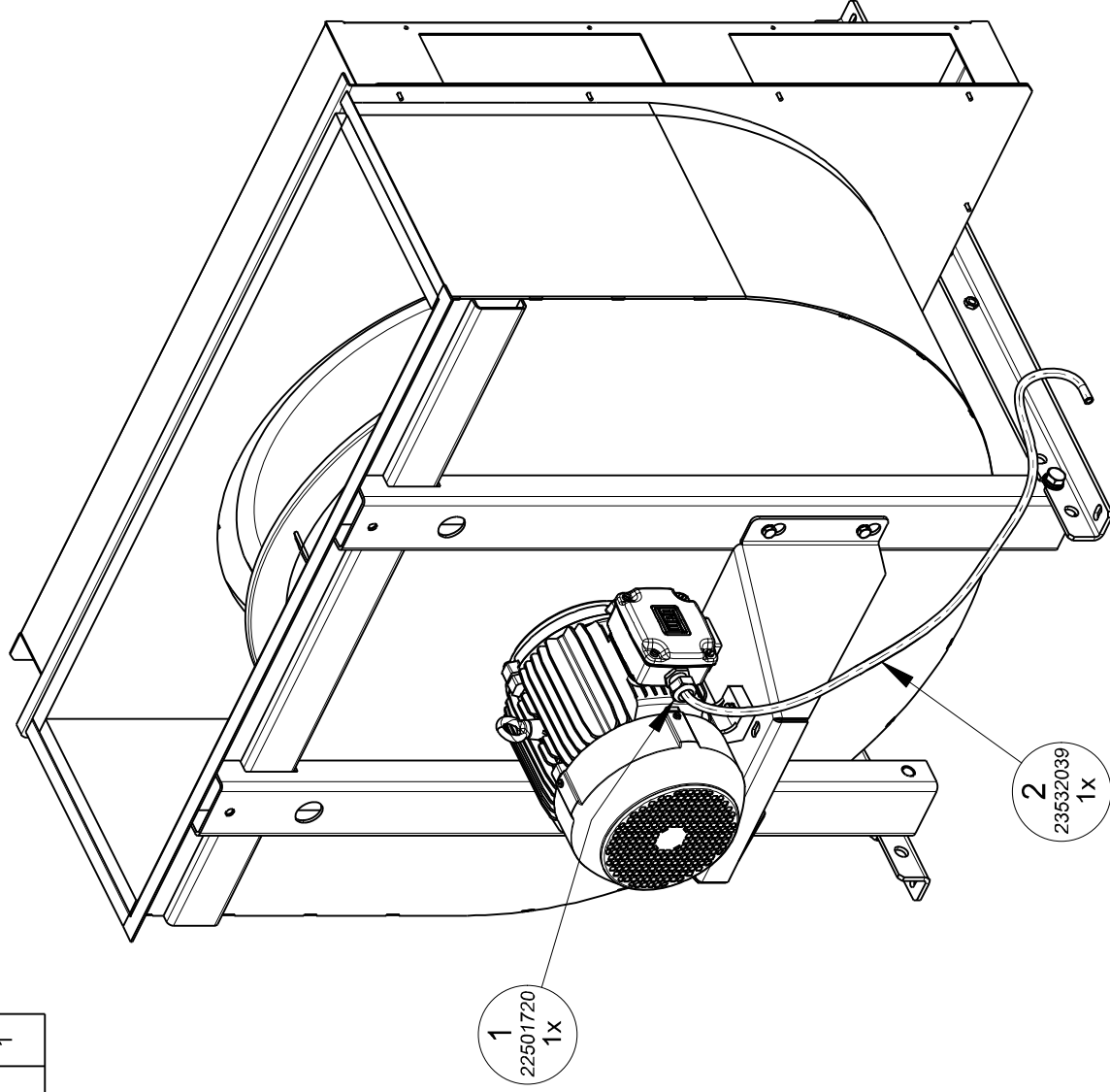
Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

80

Item	Part No.	Description	Qty.
1	22501720	GLAND, CABLE M25X1.5	1
2	23532039	CABLE, ASSEMBLY 14 AWG X 1544 FAN MOTOR	1

Description
ASSEMBLE CABLE AND CABLE GLAND.



1
22501720
1X

2
23532039
1X



Part Number : **23478712**

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Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV **B**

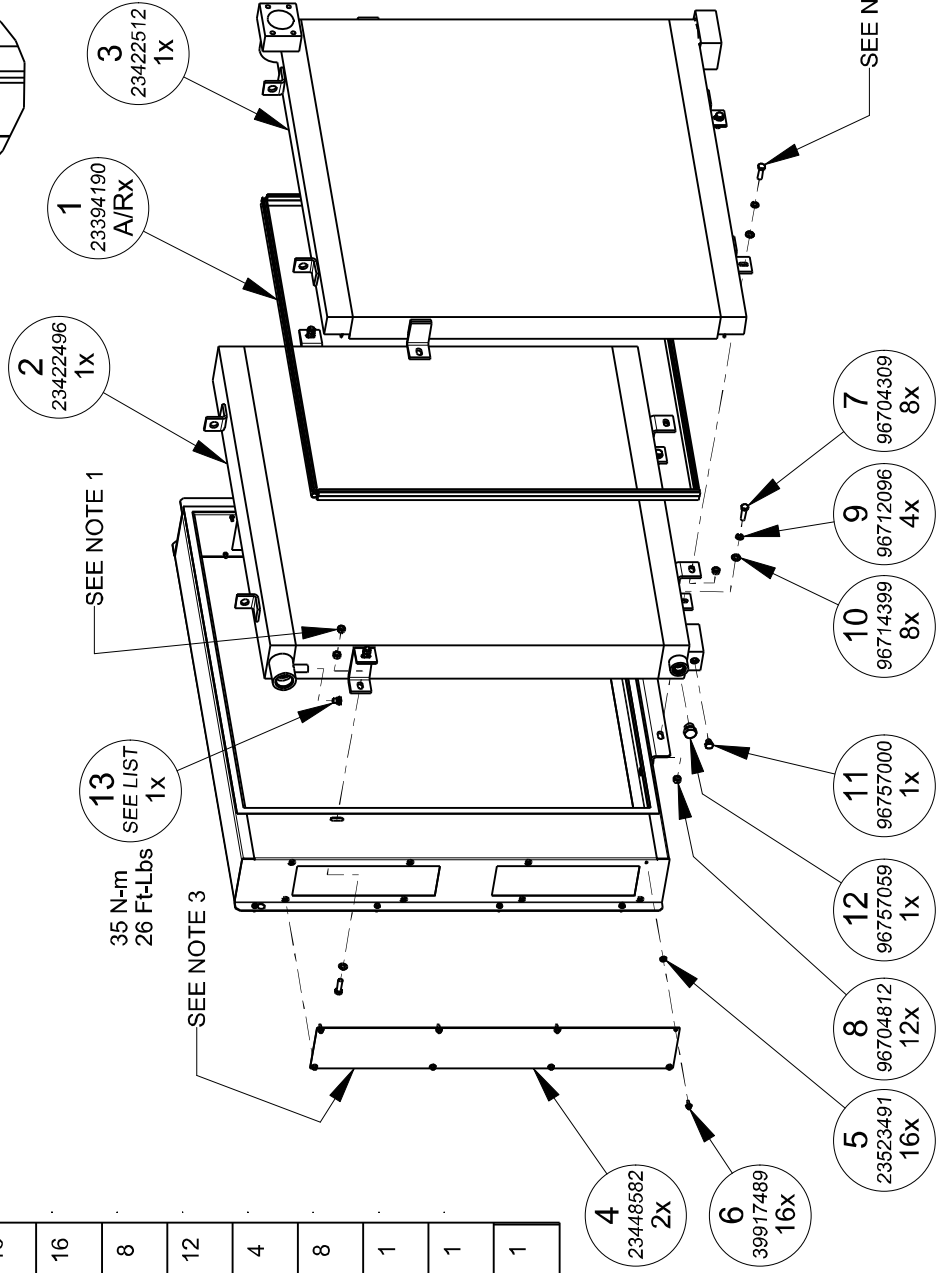
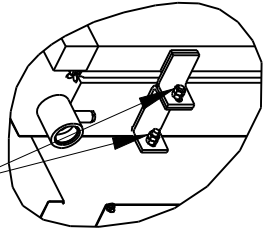
Item	Part No.	Description	Qty.
1	23394190	GASKET, SELF GRIPPING	A/R
2	23422496	COOLER, OIL (90-110 KW)	1
3	23422512	COOLER, AIR (90-110 KW)	1
4	23448582	COVER, COOLER ACCESS	2
5	23523491	RETAINER, 6mm SCREW	16
6	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	16
7	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	8
8	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	12
9	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
10	96714399	WASHER, PRODUCT GRADE A M10	8
11	96757000	PLUG, HEX HEAD M12	1
12	96757059	PLUG, HEX HEAD M22	1
13	SEE LIST	SEE LIST	1

Description
ASSEMBLE COOLERS.

NOTES:

1. FINGER TIGHTEN FIRST NUT THEN JAMB SECOND NUT TIGHT TO FIRST. COOLERS MUST NOT BE LOCKED TIGHT TO EACH OTHER OR PLENUM, TO ALLOW FOR THERMAL EXPANSION.
2. FASTNERS AT BOTTOM OF COOLERS NEED TO BE TIGHT.
3. ASSEMBLE AFTER COOLERS ARE SECURE.

SEE NOTE 1



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
13	23451842	SENSOR FOR VSD ONLY	1
13	96757059	PLUG FOR FIXED SPEED	1

65 N-m 23 N-m
48 Ft-Lbs 17 Ft-Lbs



Part Number : **23478712**

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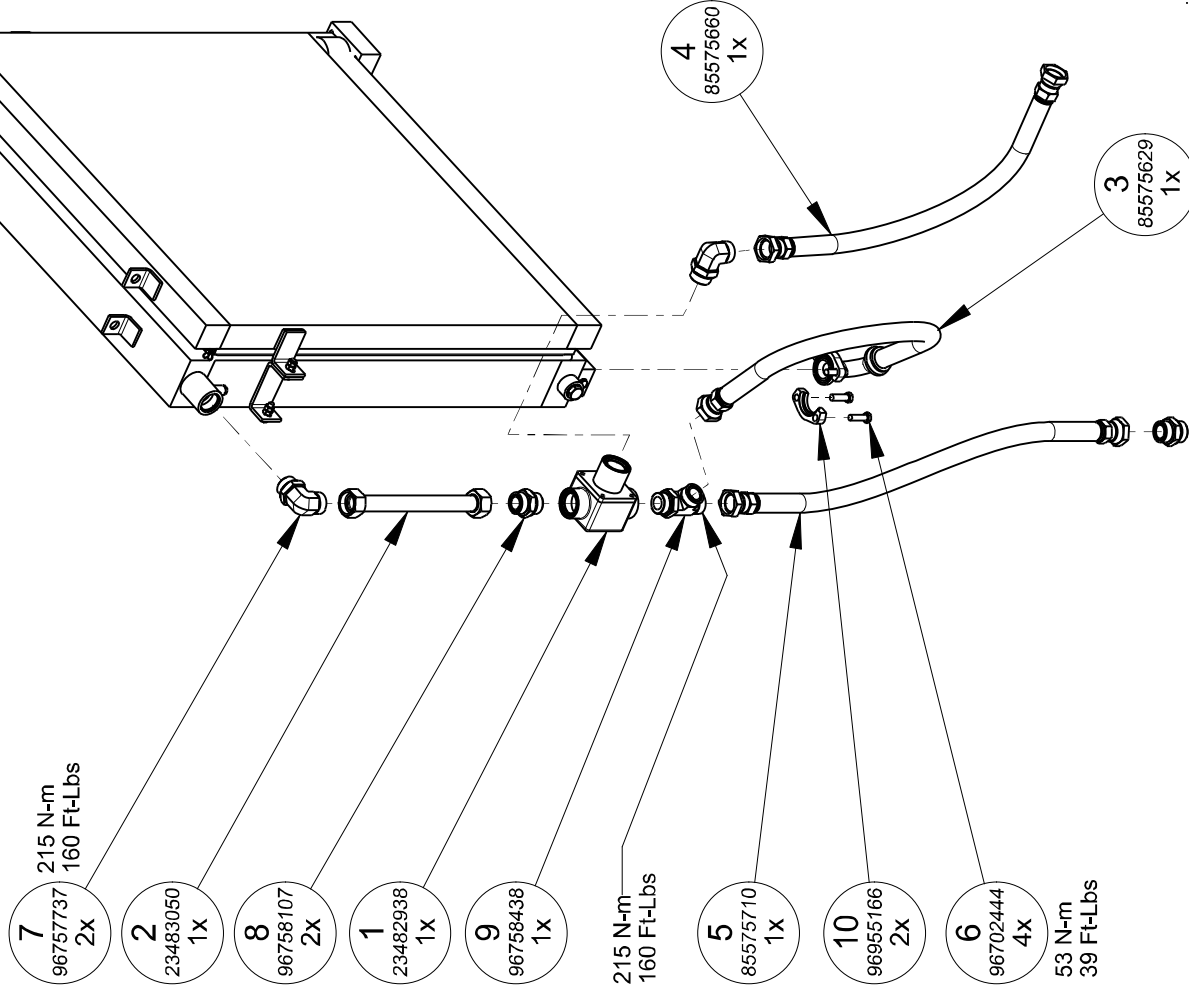
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Title : **ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV **B**

Item	Part No.	Description	Qty.
1	23482938	VALVE, TEMPERATURE CONTROL 135F, M42x2 PORTS PER ISO 6149-1	1
2	23483050	TUBE, ERS	1
3	85575629	HOSE, HYD (-20) 90 DEG DN 20-24 X 1.25 ORFS (38 INCHES)	1
4	85575660	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (32 INCHES LONG)	1
5	85575710	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (38 INCHES LONG)	1
6	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	4
7	96757737	ELBOW, 90 1.25 TUBE X M42	2
8	96758107	CONNECTOR 1.25 TUBE X M42	2
9	96758438	TEE, 1.25 1.25 X M42 X 1.25	1
10	96955166	FLANGE CLAMP, SPLIT HALF 1.50 NOMINAL	2

Description
ASSEMBLE ERS TBCV, COOLER LINES AND FITTINGS.



NOTES:

1. ALL HOSES AND TUBE ENDS TO TORQUE TIGHTENED TO 205 N-m/150 Ft-Lbs UNLESS SPECIFIED OTHERWISE.



Part Number : **23478712**

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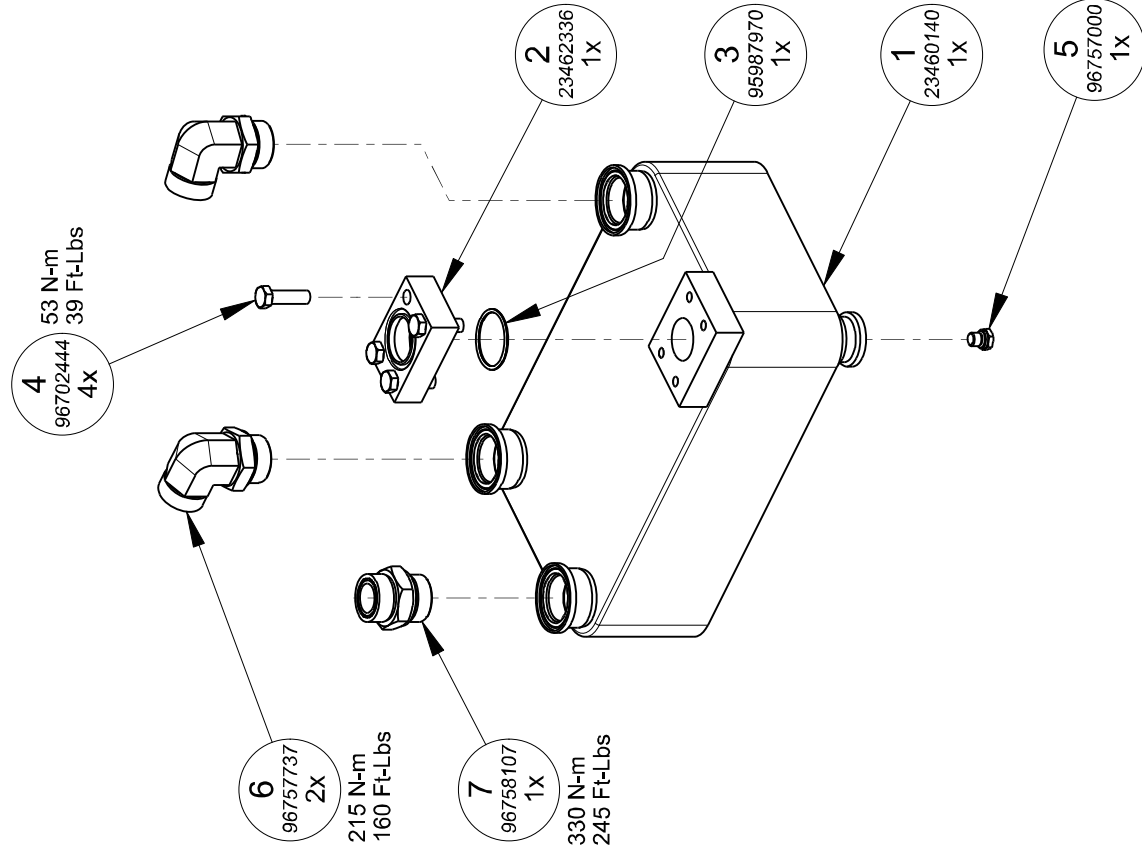
**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

Title :

REV **B**

Item	Part No.	Description	Qty.
1	23460140	OIL COOLER, WATER-COOLED	1
2	23462336	ADAPTER, ISO 6162 -1 FHG X 38 WITH ISO 6149-1 M42 X 2 PORT	1
3	95987970	ORING, STANDARD -225 1.875 ID X .125 WIDTH	1
4	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	4
5	96757000	PLUG, HEX HEAD M12	1
6	96757737	ELBOW, 90 1.25 TUBE X M42	2
7	96758107	CONNECTOR 1.25 TUBE X M42	1

Description
ASSEMBLE FITTINGS TO ERS COOLER.





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Part Number :

23478712

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Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

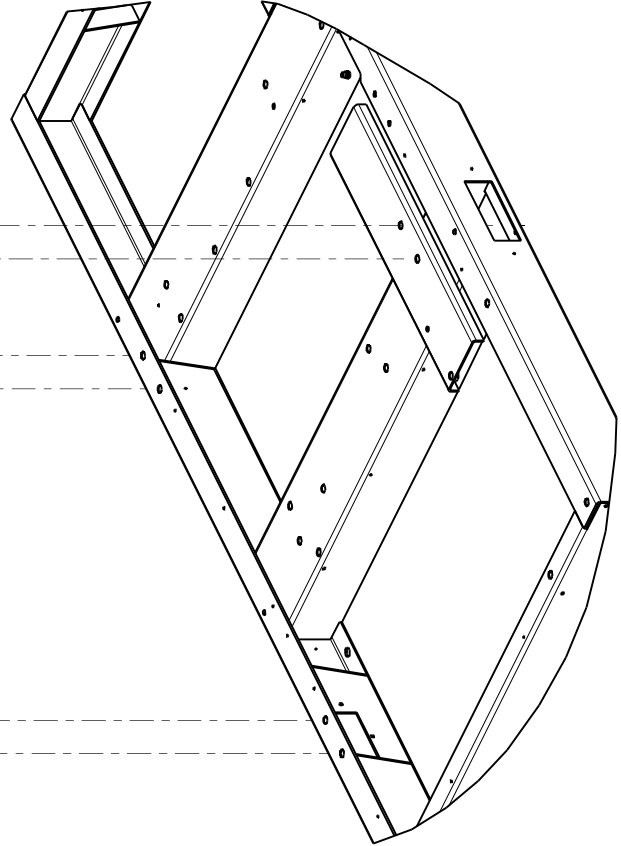
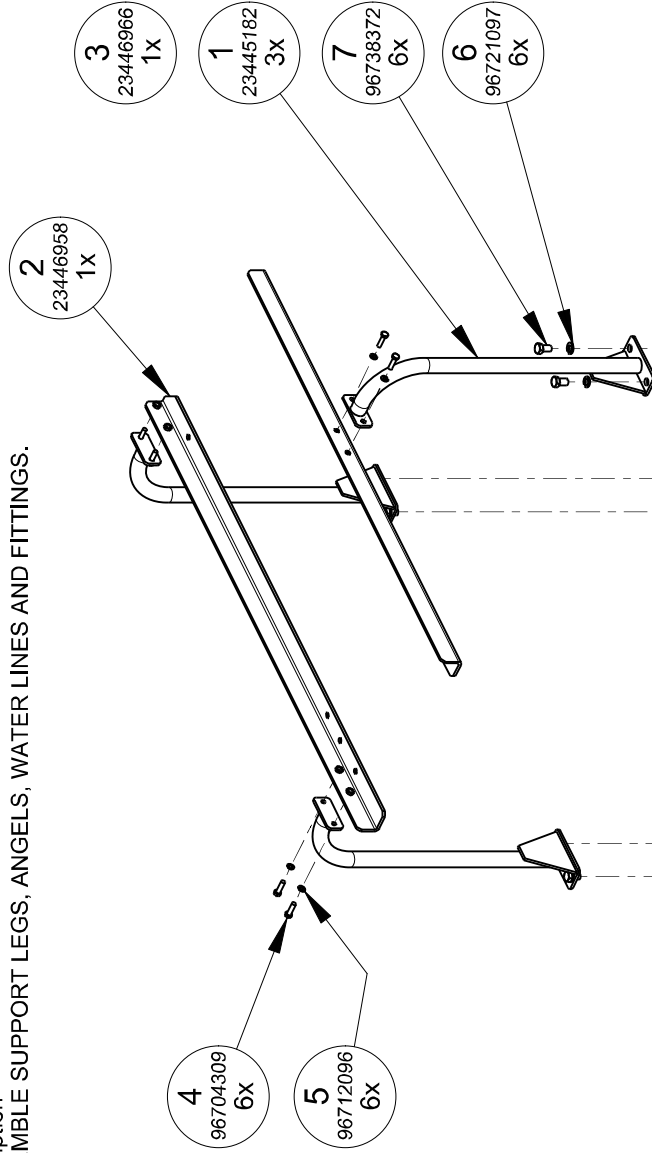
REV

B

Item	Part No.	Description	Qty.
1	23445182	LEG, COOLER / BLOWER SUPPORT	3
2	23446958	ANGLE, BLOWER / COOLER SUPPORT (LONG)	1
3	23446966	ANGLE, BLOWER / COOLER SUPPORT (SHORT)	1
4	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	6
5	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	6
6	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	6
7	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	6

Description

ASSEMBLE SUPPORT LEGS, ANGLES, WATER LINES AND FITTINGS.





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Part Number :

23478712

Title :

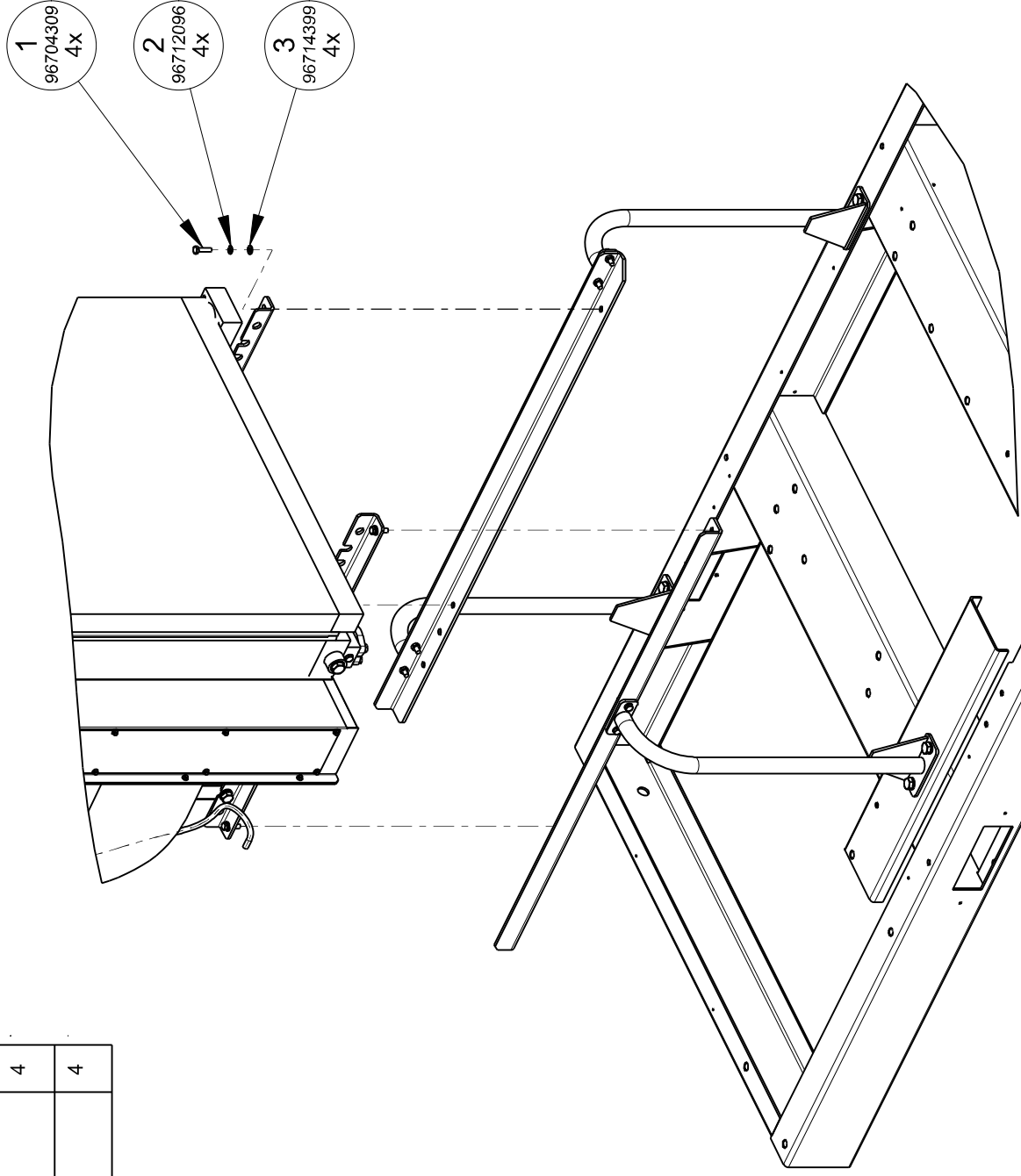
**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV

B

Item	Part No.	Description	Qty.
1	96704309	SCREW, HEX HEAD M10-1.50 X 35.0 LONG	4
2	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
3	96714399	WASHER, PRODUCT GRADE A M10	4

Description
ASSEMBLE COOLER/BLOWER ASSEMBLY TO LEGS.





Part Number : **23478712**

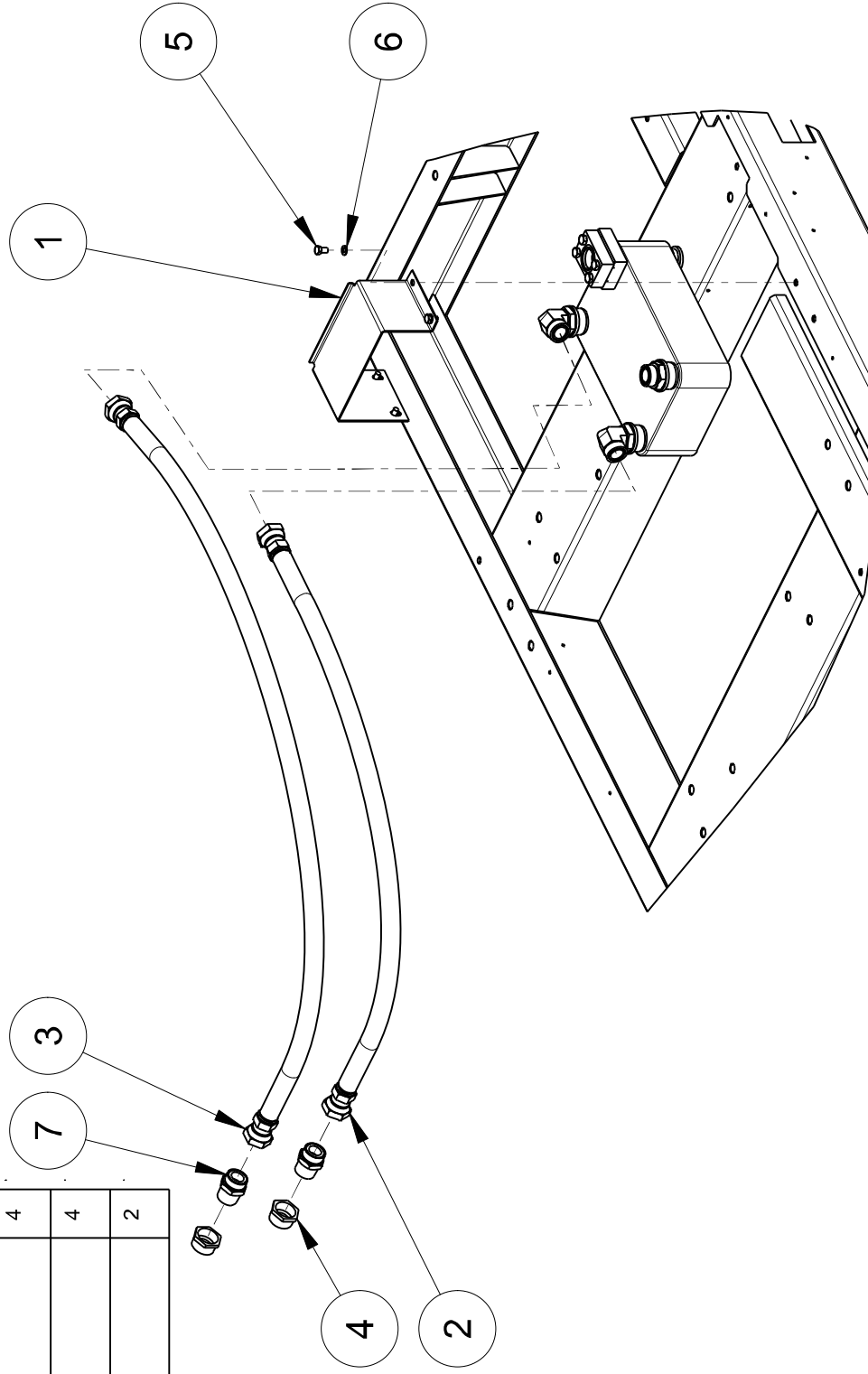
Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV **B**

Item	Part No.	Description	Qty.
1	23462633	BRACKET, OIL COOLER MOUNTING WATER COOLED	1
2	85575694	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (56 INCHES LONG)	1
3	85575702	HOSE, HYD (-20) 1.25 ORFS x 1.25 ORFS (69 INCHES LONG)	1
4	95950341	BUSHING, REDUCER 1.50 NPT X 1.25 FNPT	2
5	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	4
6	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
7	96955422	CONNECTOR 1.25 TUBE X 1.25 NPTF	2

Description
ASSEMBLE ERS COOLER AND WATER LINES



NOTES:

1. ALL HOSES AND TUBE ENDS TO TORQUE TIGHTENED TO 205 N·m / 150 Ft-Lbs UNLESS SPECIFIED OTHERWISE.



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Part Number : **23478712**

87

Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV **B**

Item	Part No.	Description	Qty.
1	23428261	TUBE, TANK TO AFT-CLR AIR COOLED	1
2	23429632	TUBE, HSTCV TO COOLER	2
3	85575686	HOSE, HYD (-20) 1.25 ORFS X 1.25 ORFS (43 INCHES)	1
4	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2
5	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4
6	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8
7	96756192	UNION, STRAIGHT 1.25	2
8	96758107	CONNECTOR 1.25 TUBE X M42	2

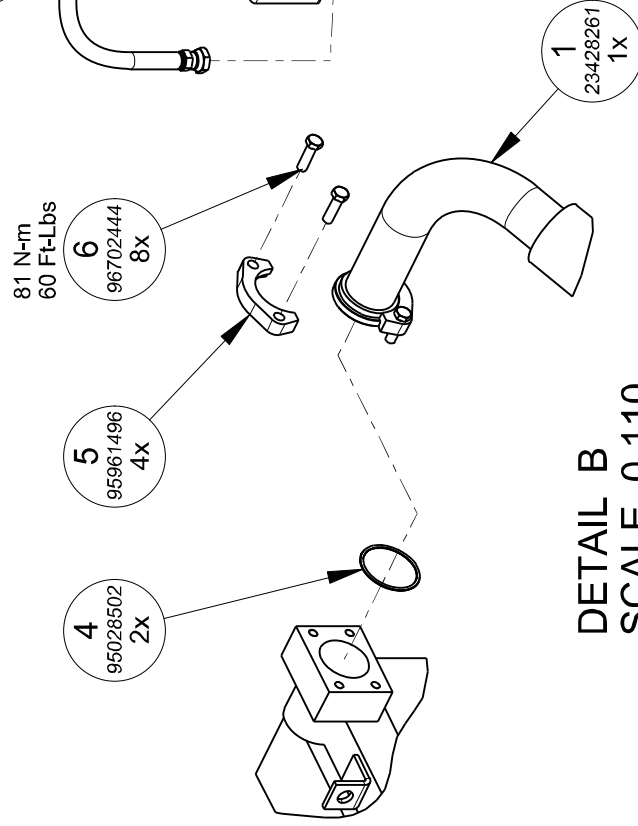
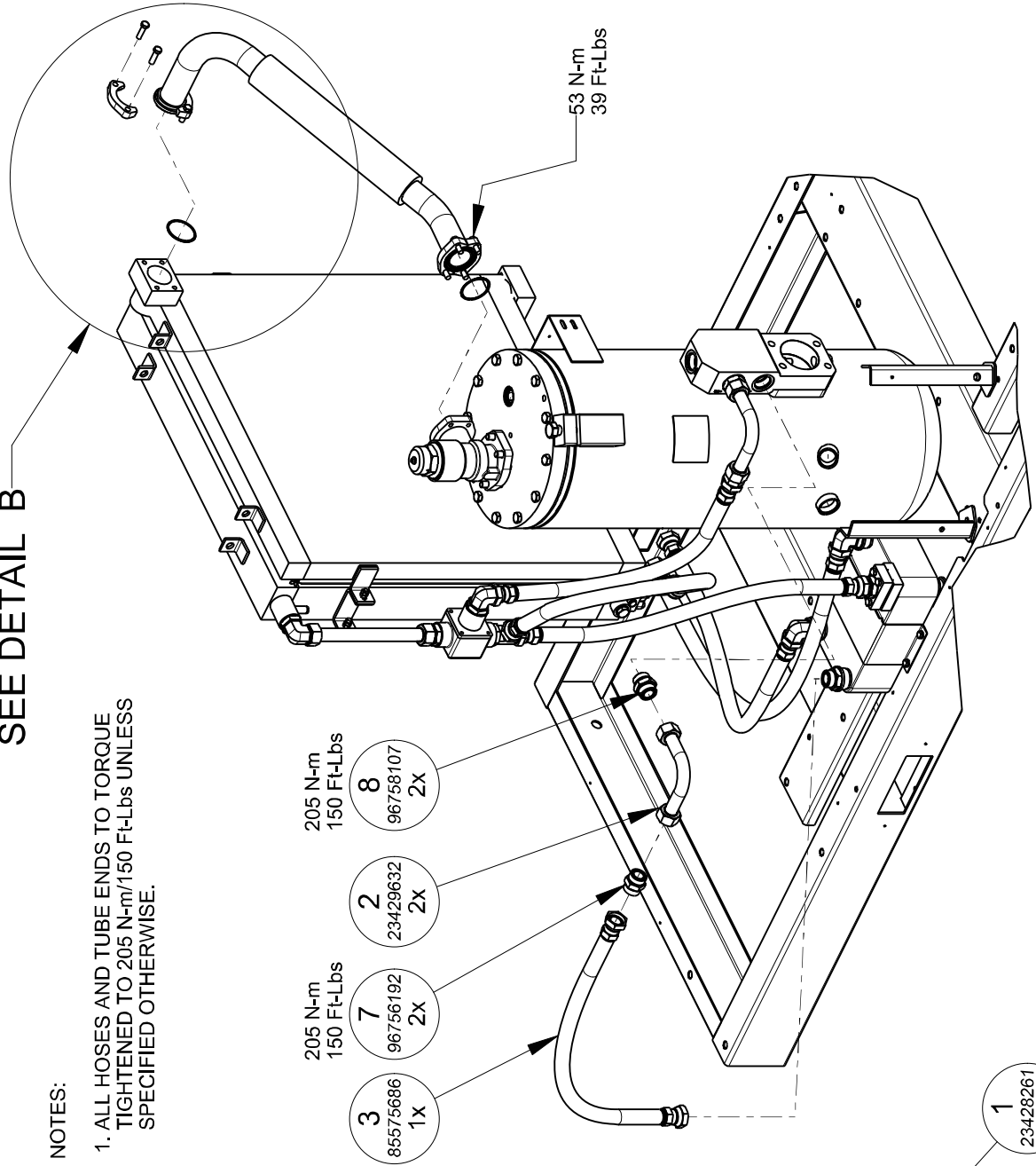
Description

ATTACH COOLER HOSES AND ATTACH TUBE FROM MPCV TO AFTER COOLER.

SEE DETAIL B

NOTES:

1. ALL HOSES AND TUBE ENDS TO TORQUE TIGHTENED TO 205 N-m/150 Ft-Lbs UNLESS SPECIFIED OTHERWISE.



DETAIL B
SCALE 0.110



Part Number : **23478712**

88

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Title :

**ASSEMBLY INST., COOLING
(AIR COOLED WITH ERS)**

REV **B**

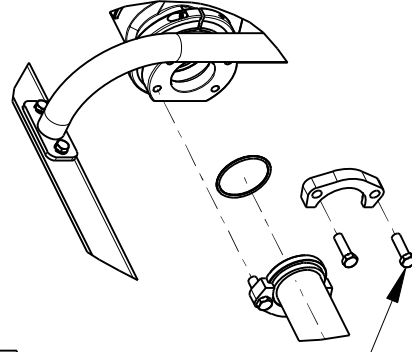
Qty.

Item	Part No.	Description	Qty.
1	23428345	TUBE, 2.50" AFTER COOLER OUTLET	1
2	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	2
3	95961496	FLANGE CLAMP, SPLIT HALF 2.50 NOMINAL	4
4	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	8

Description
ASSEMBLE DISCHARGE TUBE TO AFTER COOLER AND MOISTURE SEPARATOR.

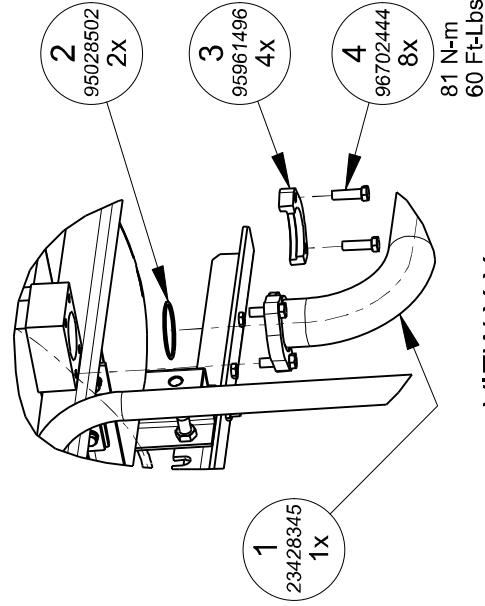
SEE EXPLODED VIEW Y

SEE EXPLODED VIEW X

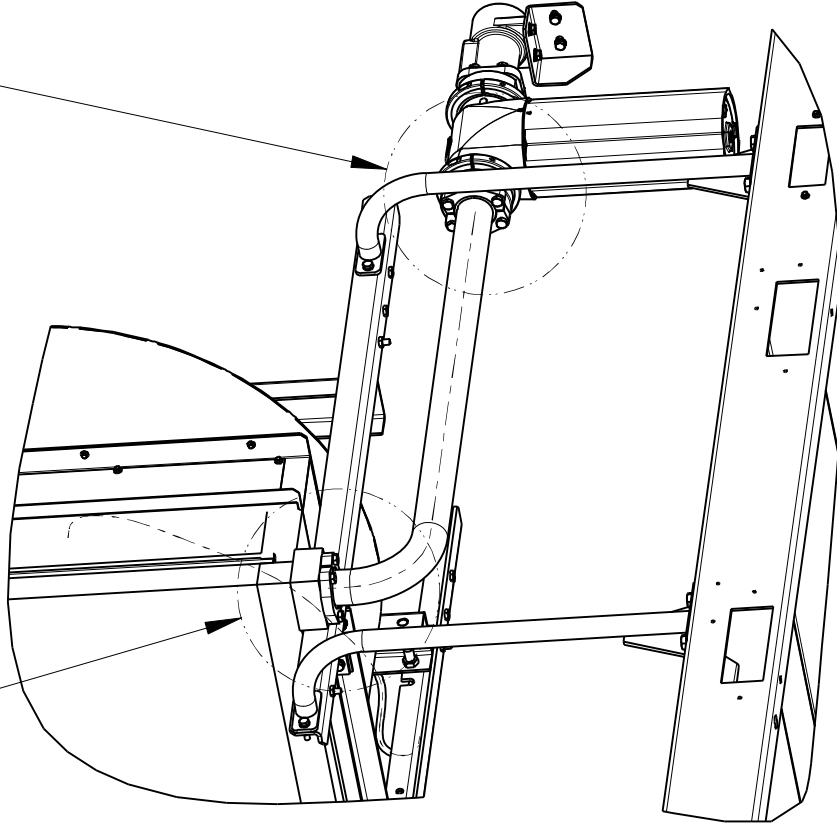


53 N-m
39 Ft-Lbs

VIEW X-X
SCALE 0.100



VIEW Y-Y
SCALE 0.100





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89

Part Number :

23464167

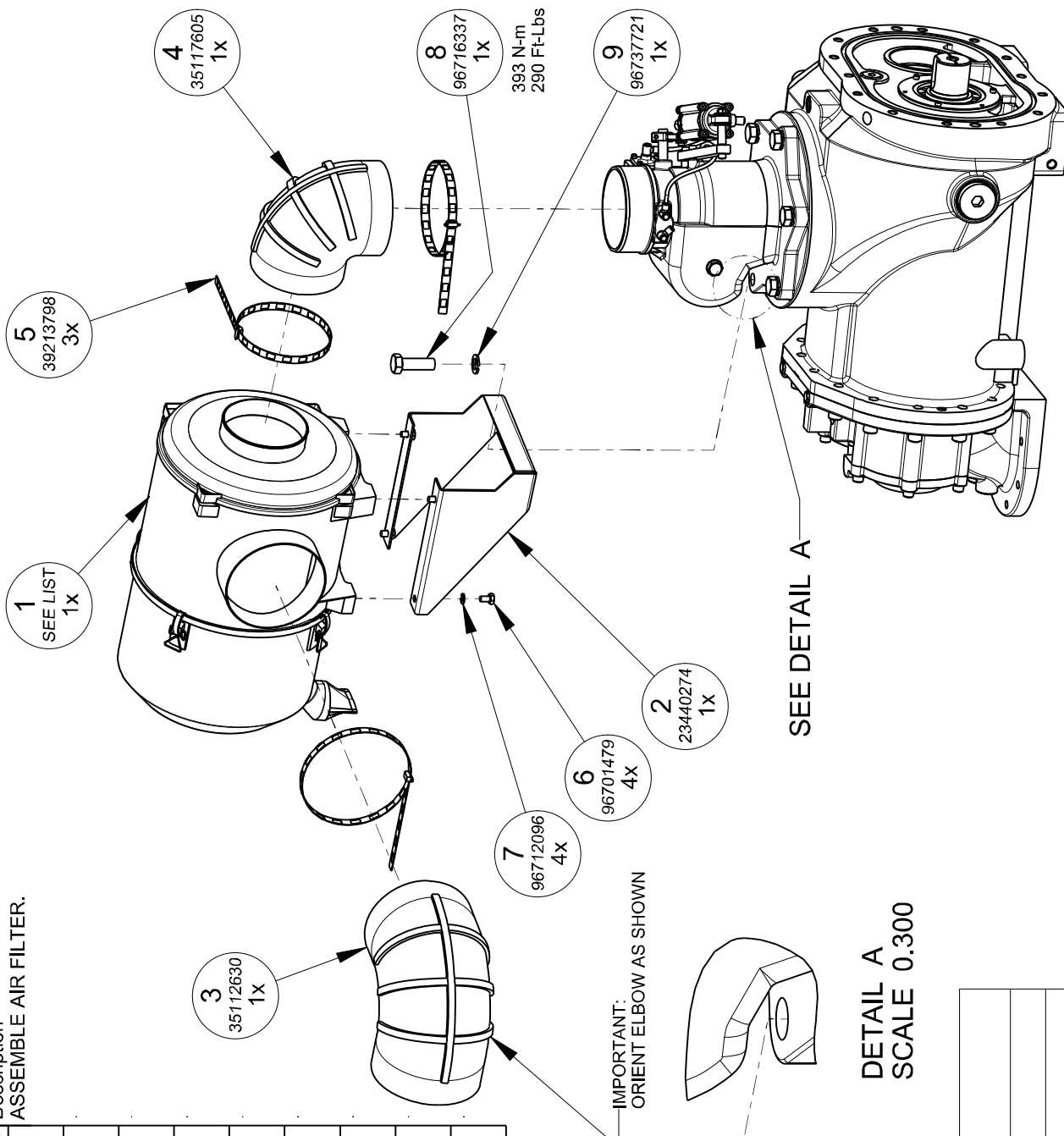
Title :

**ASSEMBLY INST., AIR FILTER
(STANDARD & HIGH DUST)**

REV **B**

Item	Part No.	Description	Qty.
1	SEE LIST	AIR CLEANER ASSEMBLY	1
2	23440274	SUPPORT, AIR FILTER	1
3	35112630	ELBOW, 90 DEG. SHORT RADIUS	1
4	35117605	ELBOW, 90 DEG. SHORT RADIUS	1
5	39213798	CLAMP, HOSE	3
6	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	4
7	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
8	96716337	SCREW, HEX HEAD M20-2.50 X 60.0 LONG	1
9	96737721	WASHER, SPRING LOCK, CURVED TYPE A, M20	1

Description
ASSEMBLY AIR FILTER.



SEE DETAIL A

DETAIL A
SCALE 0.300

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	23390131	AIR FILTER - STANDARD
1	23415821	AIR FILTER - HIGH DUST



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Part Number : **23461098**

90

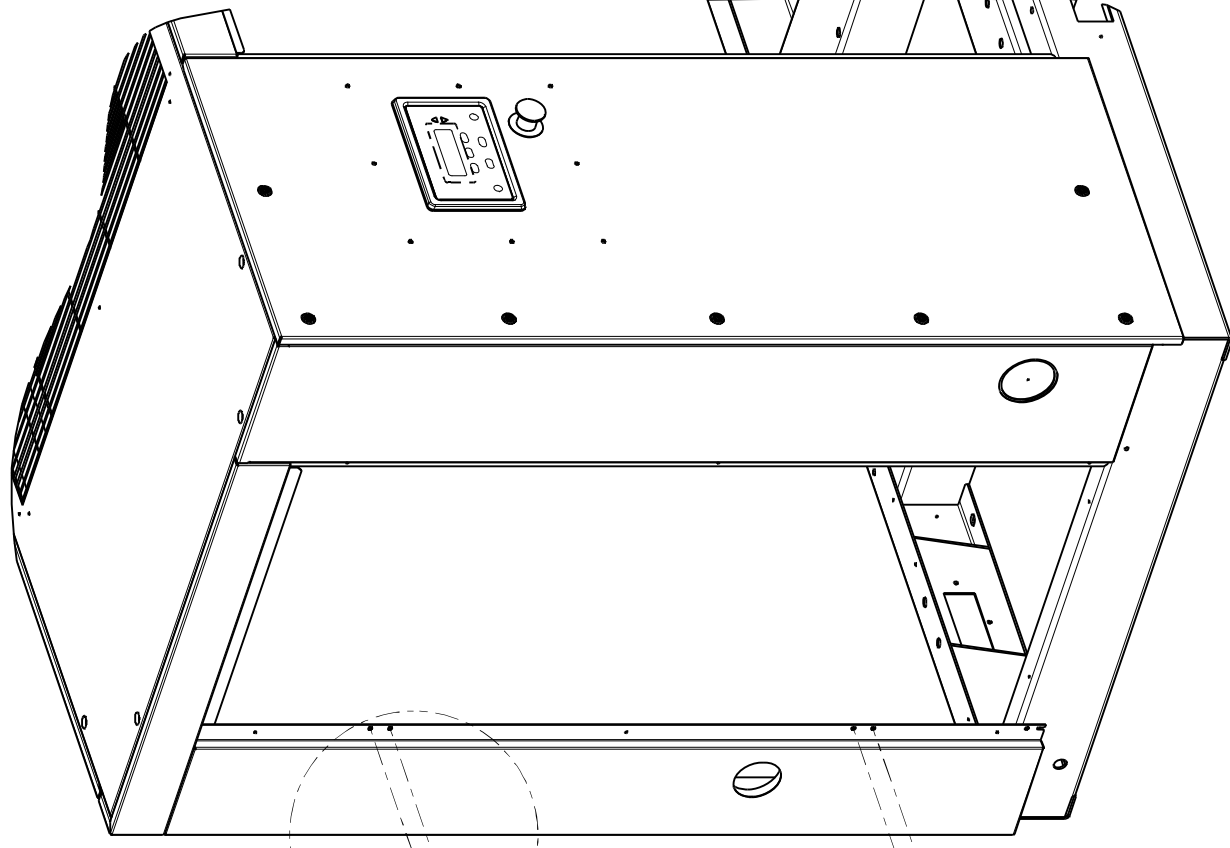
Title :

**ASSEMBLY INST., PRE-FILTER
(STANDARD)**

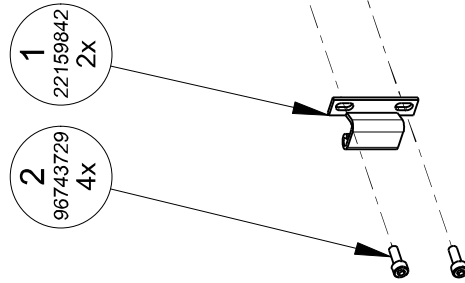
REV

B

Item	Part No.	Description	Qty.	Description
1	22159842	HINGE, PIN HALF	2	ASSEMBLE HINGES TO MOUNT THE PACKAGE INTAKE DOOR
2	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	4	



SEE DETAIL A



DETAIL A
SCALE 0.200



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Industrial Technologies

91

Part Number :

23461098

Title :

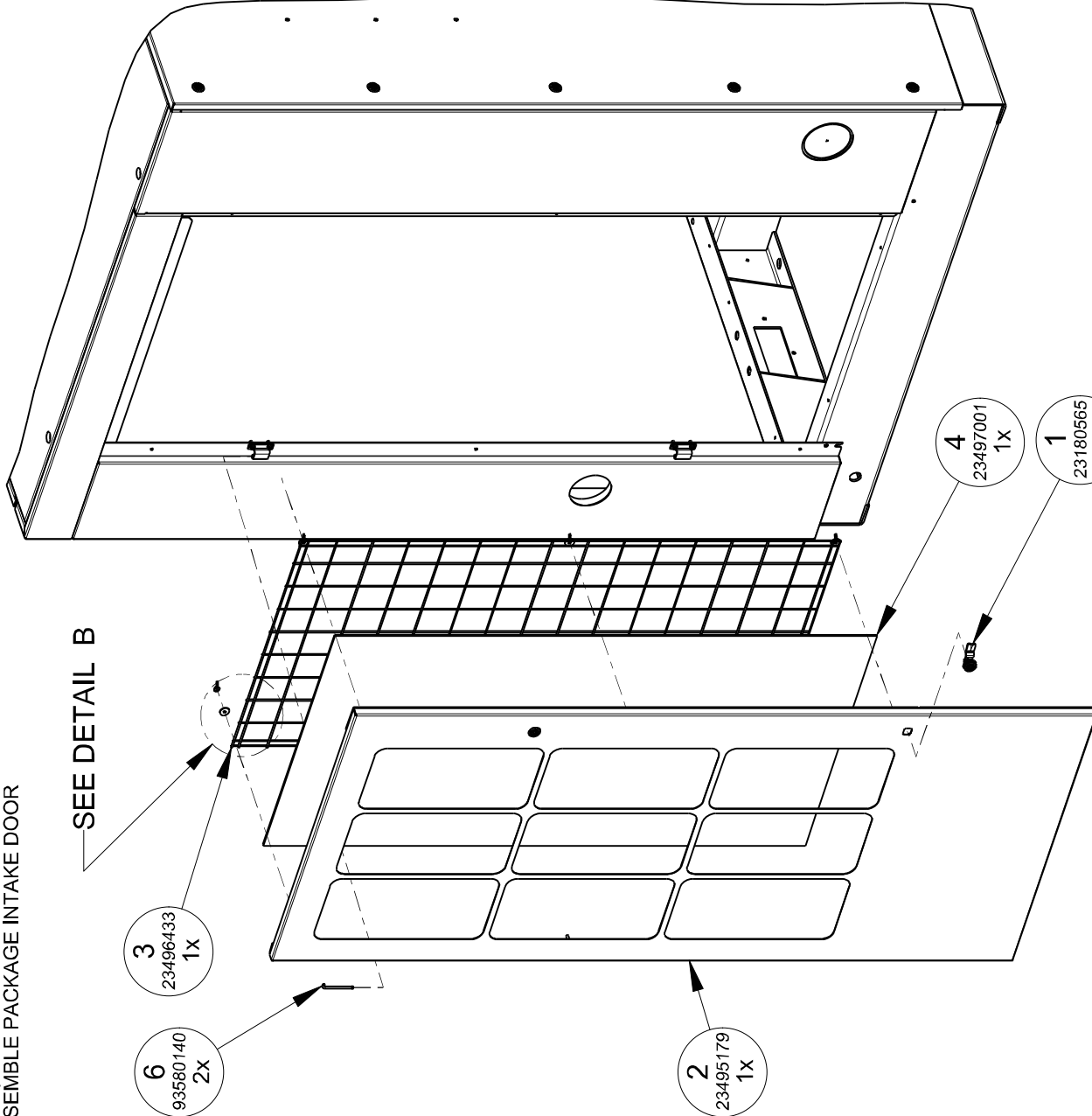
**ASSEMBLY INST., PRE-FILTER
(STANDARD)**

REV

B

Item	Part No.	Description	Qty.
1	23180565	LATCH, DOOR (NEMA 4) 28mm HEAD / 24mm OFFSET	2
2	23495179	ASSEMBLY, PACKAGE INTAKE DOOR (WITH FOAM)	1
3	23496433	GRILL, INTAKE	1
4	23497001	PAD, PRE-FILTER (10 X 675 X 1315)	1
5	39232889	NUT, WING (M6 X 1.0)	6
6	93580140	HINGE, PIN	2
7	96745559	WASHER, LARGE OUTSIDE DIAMETER PRODUCT GRADE C M6	6

Description
ASSEMBLY PACKAGE INTAKE DOOR



**DETAIL B
SCALE 0.250**



Ingersoll Rand
Industrial Technologies

Part Number : **23554918**

92

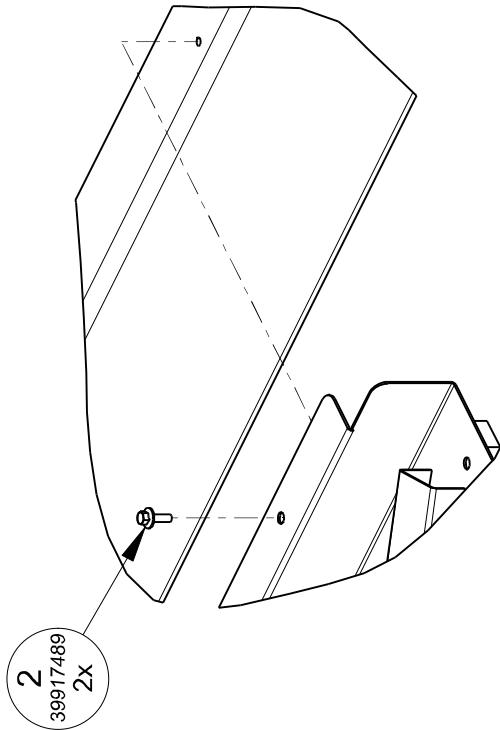
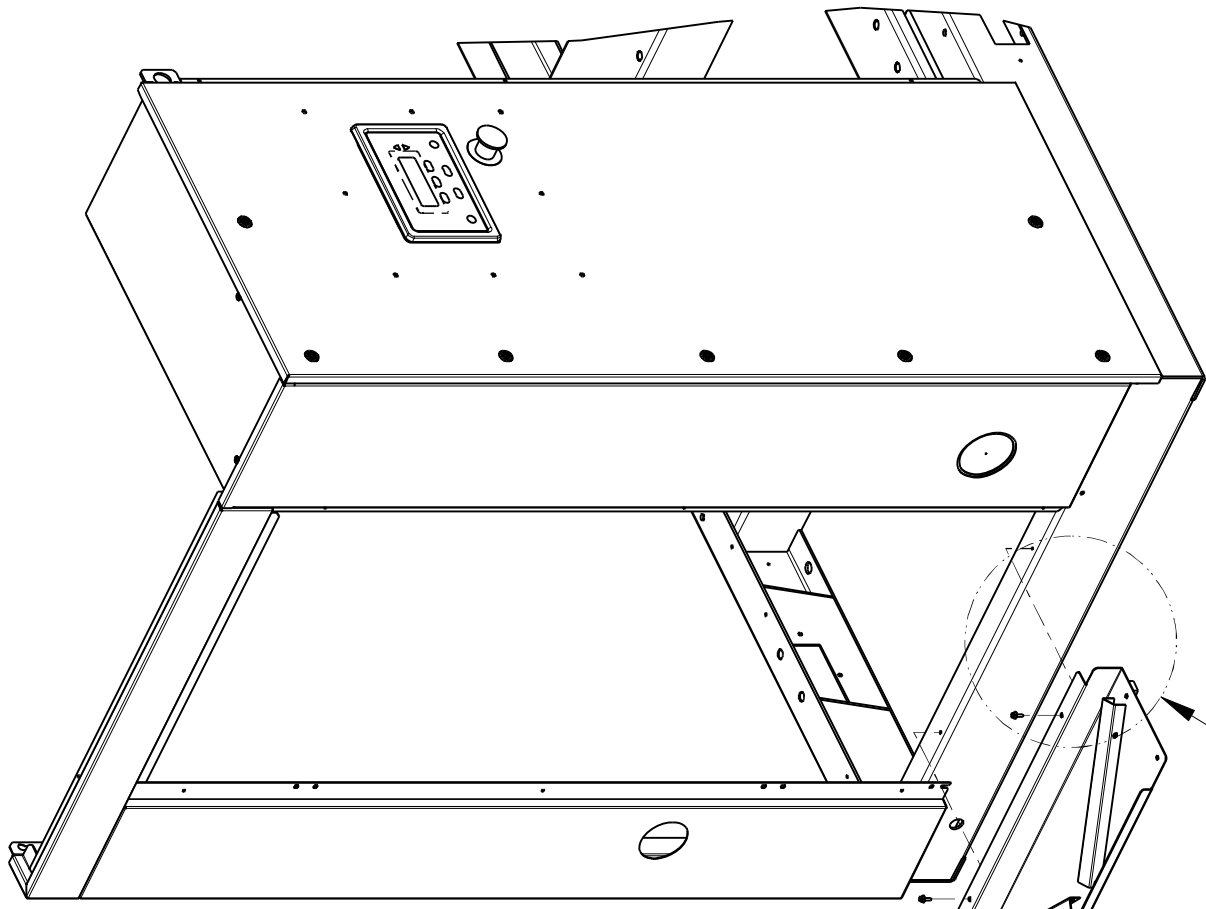
REV
A

Title :

**ASSEMBLY INST., PRE FILTER
HI DUST**

Description
ASSEMBLE BOTTOM PANEL

Item	Part No.	Description	Qty.
1	23517485	ASSEMBLY, BOTTOM PANEL (WITH FOAM)	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	2



2
39917489
2X

DETAIL A
SCALE 0.200

1
23517485
1X

SEE DETAIL A



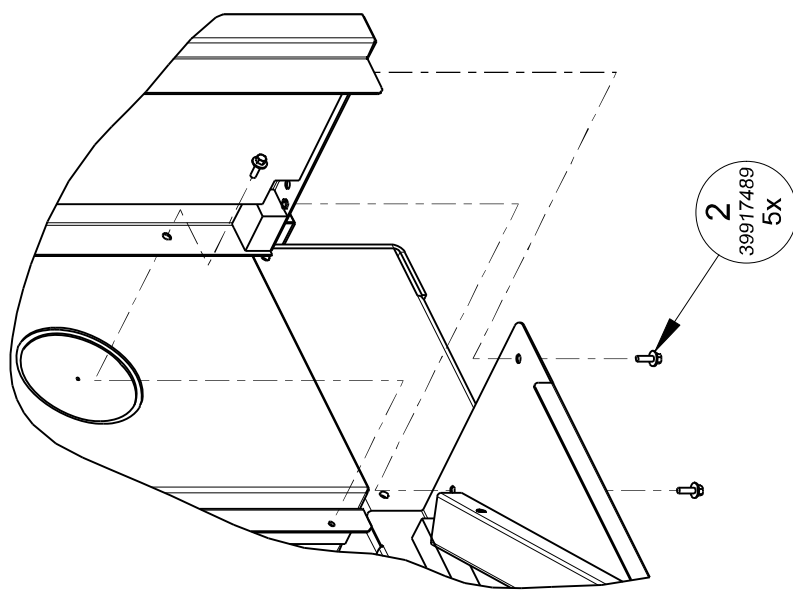
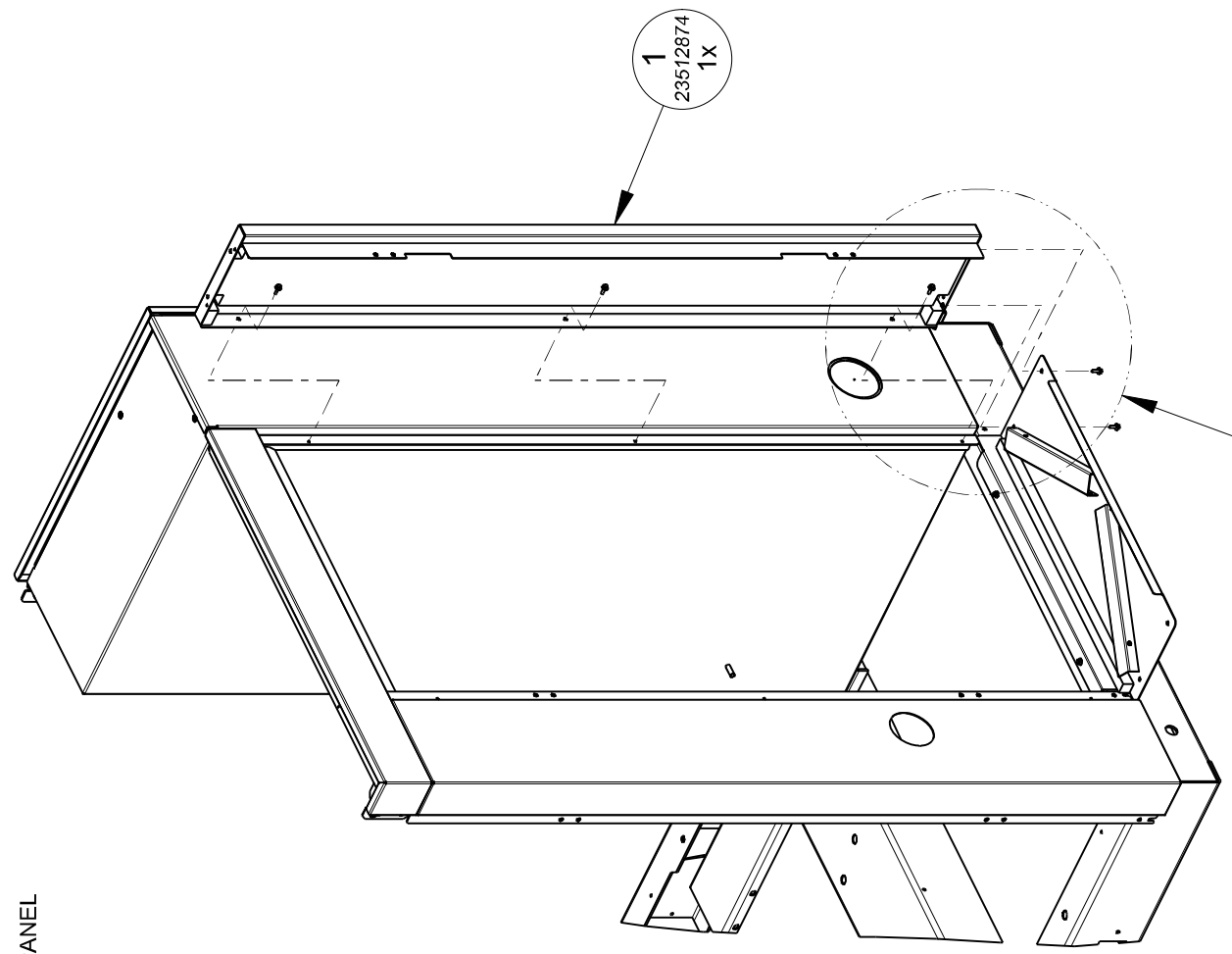
Part Number : **23554918**

Title : **ASSEMBLY INST., PRE FILTER
HI DUST**

REV **A**

93

Item	Part No.	Description	Qty.	Description
1	23512874	ASSEMBLY, SIDE PANEL (WITH FOAM)	1	ASSEMBLE RIGHT SIDE PANEL
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	5	



DETAIL B
SCALE 0.150

SEE DETAIL B
ingersollrandproducts.com



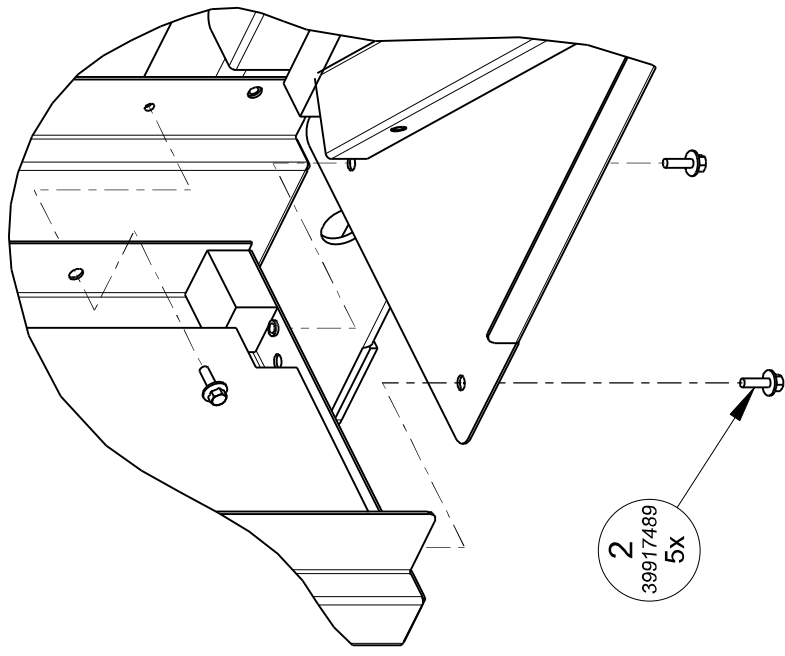
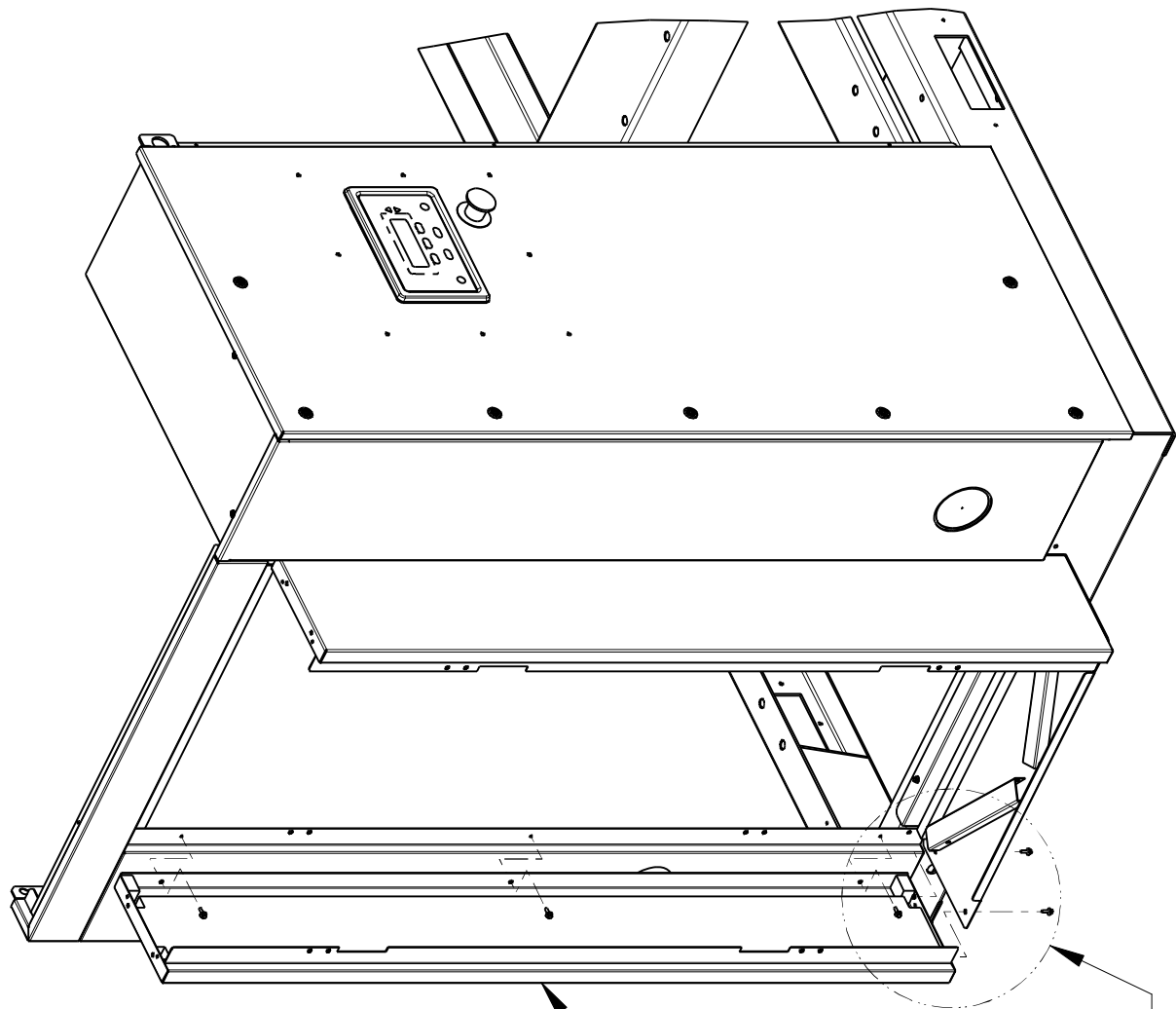
Ingersoll Rand
Industrial Technologies

Part Number : **23554918**

94

REV **A**
Title : **ASSEMBLY INST., PRE FILTER
HI DUST**

Item	Part No.	Description	Qty.	Description
1	23512874	ASSEMBLY, SIDE PANEL (WITH FOAM)	1	ASSEMBLE LEFT SIDE PANEL
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	5	



1
23512874
1X

2
39917489
5X

DETAIL C
SCALE 0.250

SEE DETAIL C



Ingersoll Rand
Industrial Technologies

Part Number : **23554918**

95

Title :

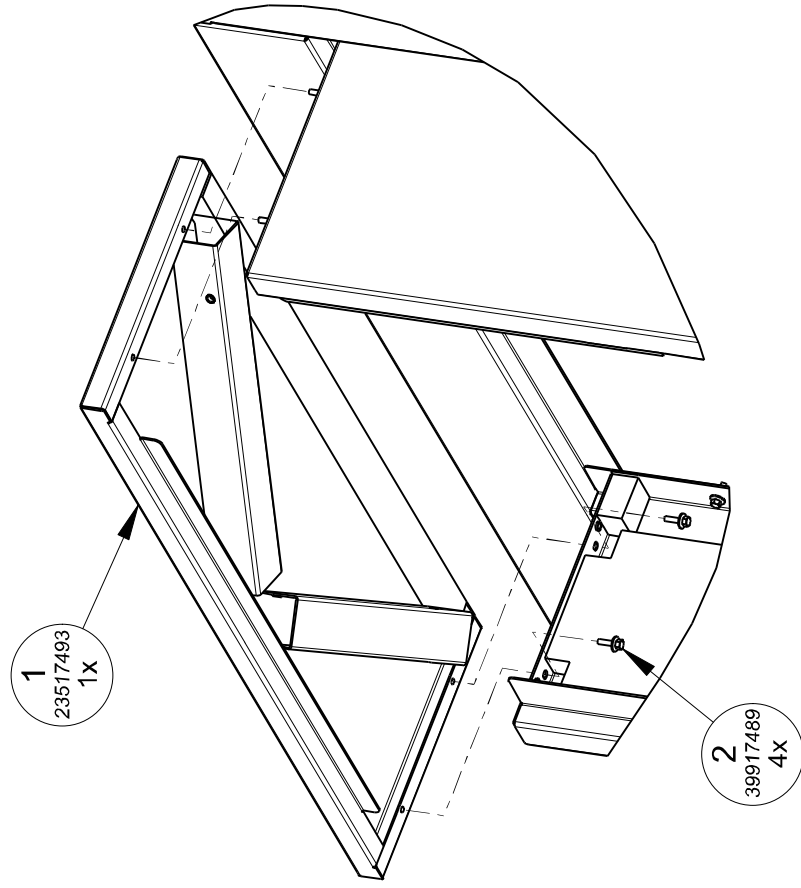
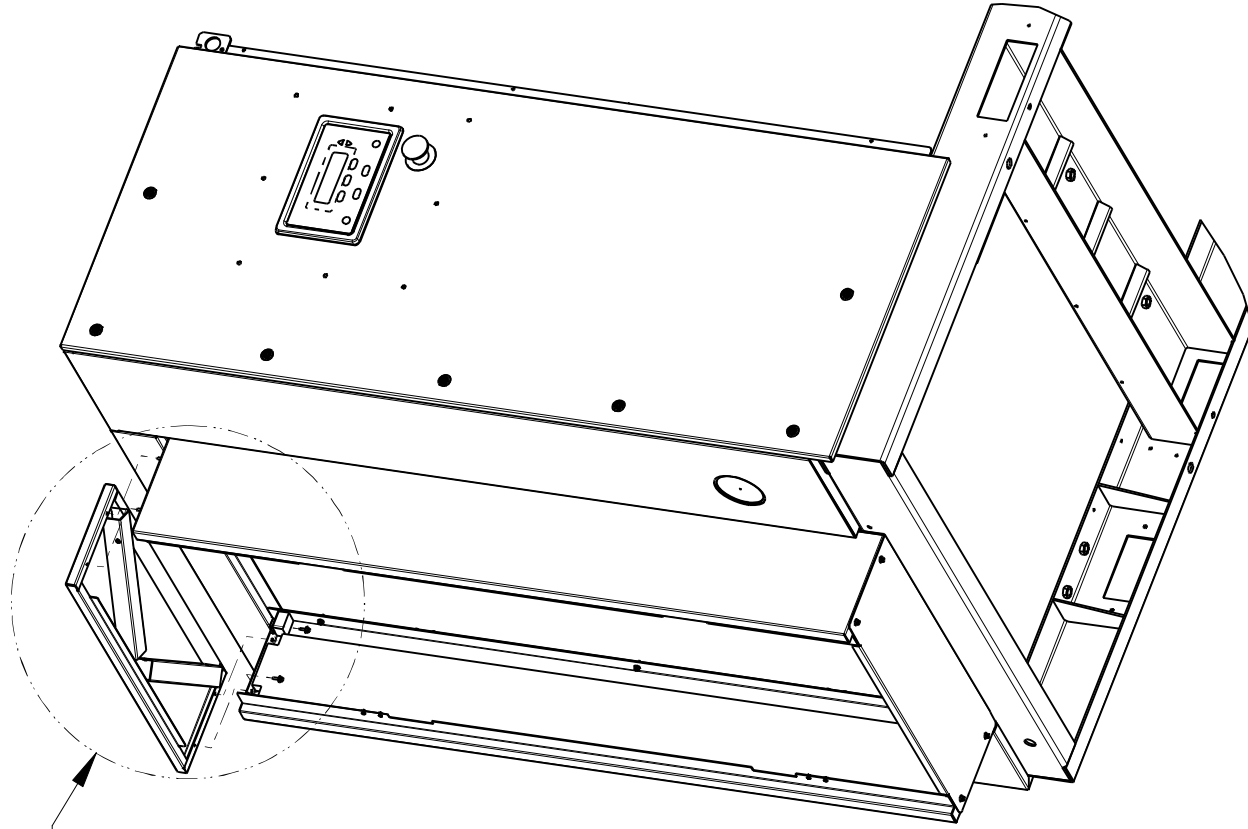
**ASSEMBLY INST., PRE FILTER
HI DUST**

REV

A

Item	Part No.	Description	Qty.	Description
1	23517493	ASSEMBLY, TOP PANEL (WITH FOAM)	1	ASSEMBLE TOP PANEL
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	4	

SEE DETAIL D



DETAIL D
SCALE 0.150



Part Number : 23554918

Title :

ASSEMBLY INST., PRE FILTER HI DUST

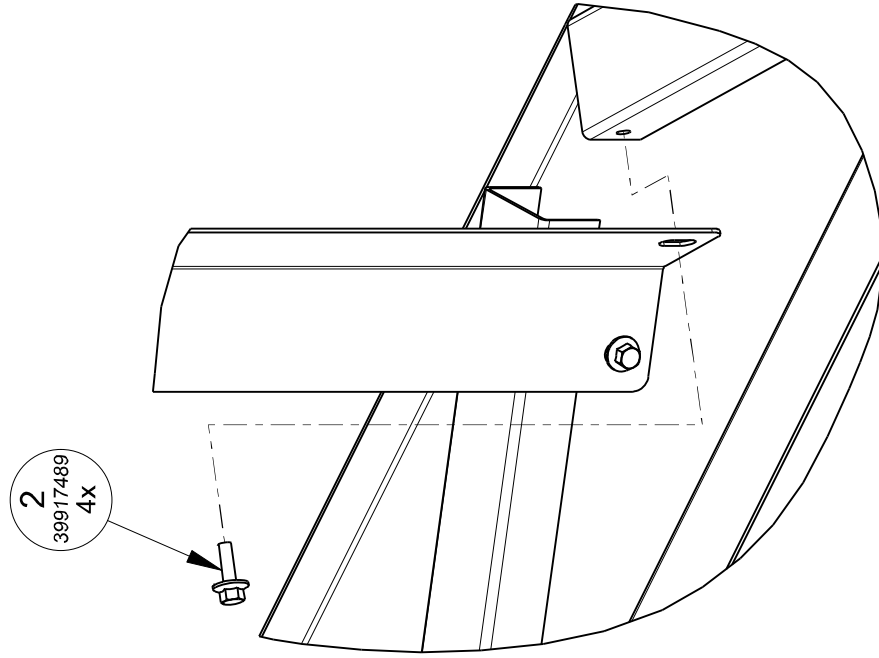
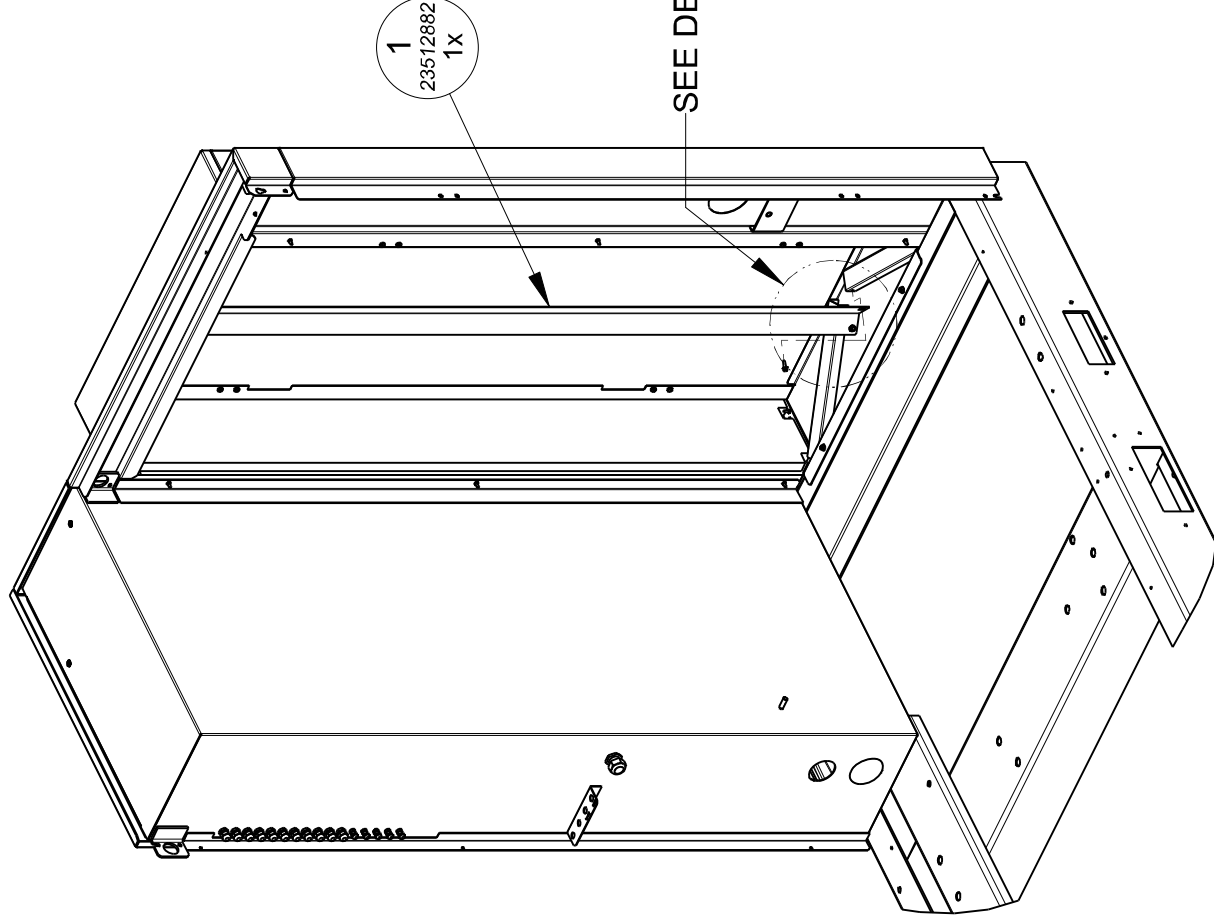
REV

A

96

Description
ASSEMBLE CENTER POST

Item	Part No.	Description	Qty.
1	23512882	ANGLE, PRE-FILTER	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	4



DETAIL E
SCALE 0.350



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Industrial Technologies

Part Number : **23554918**

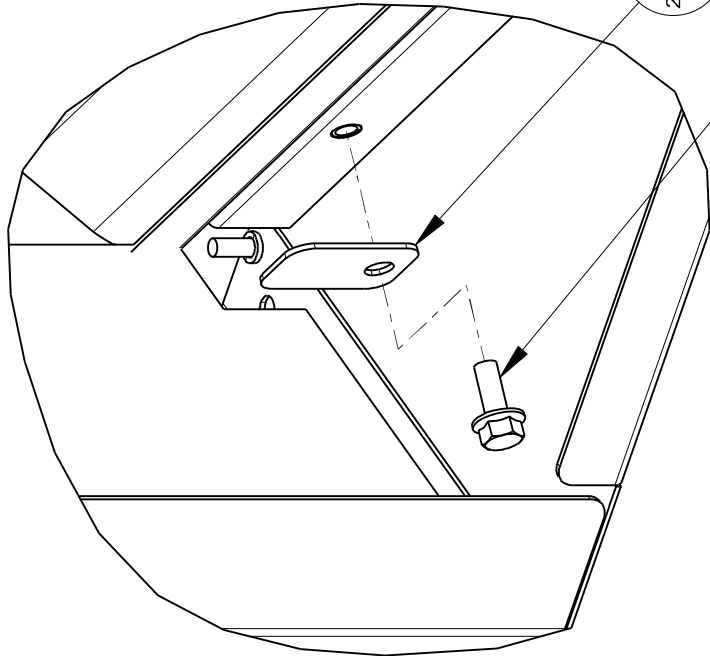
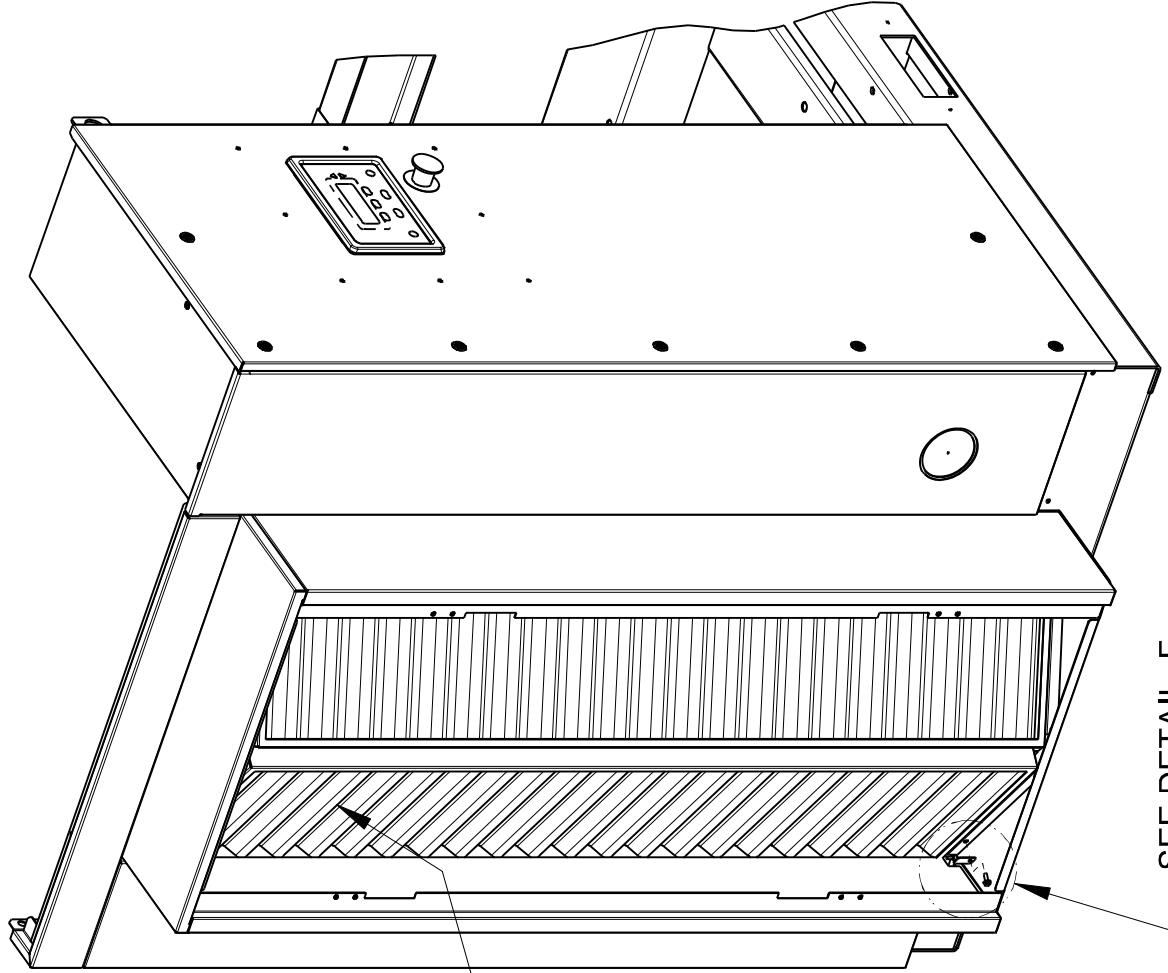
97

REV
A

Title : **ASSEMBLY INST., PRE FILTER
HI DUST**

Description
ASSEMBLE FILTER PANELS

Item	Part No.	Description	Qty.
1	23512866	FILTER, PANEL AIR	2
2	23517519	TAB, FILTER PANEL	8
3	96742689	BOLT, HEX FLANGE M6-1.00 X 16.0 LONG	8



DETAIL F
SCALE 0.500

1
23512866
2x

2
23517519
8x

3
96742689
8x

SEE DETAIL F



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Industrial Technologies

98

Part Number :

23554918

Title :

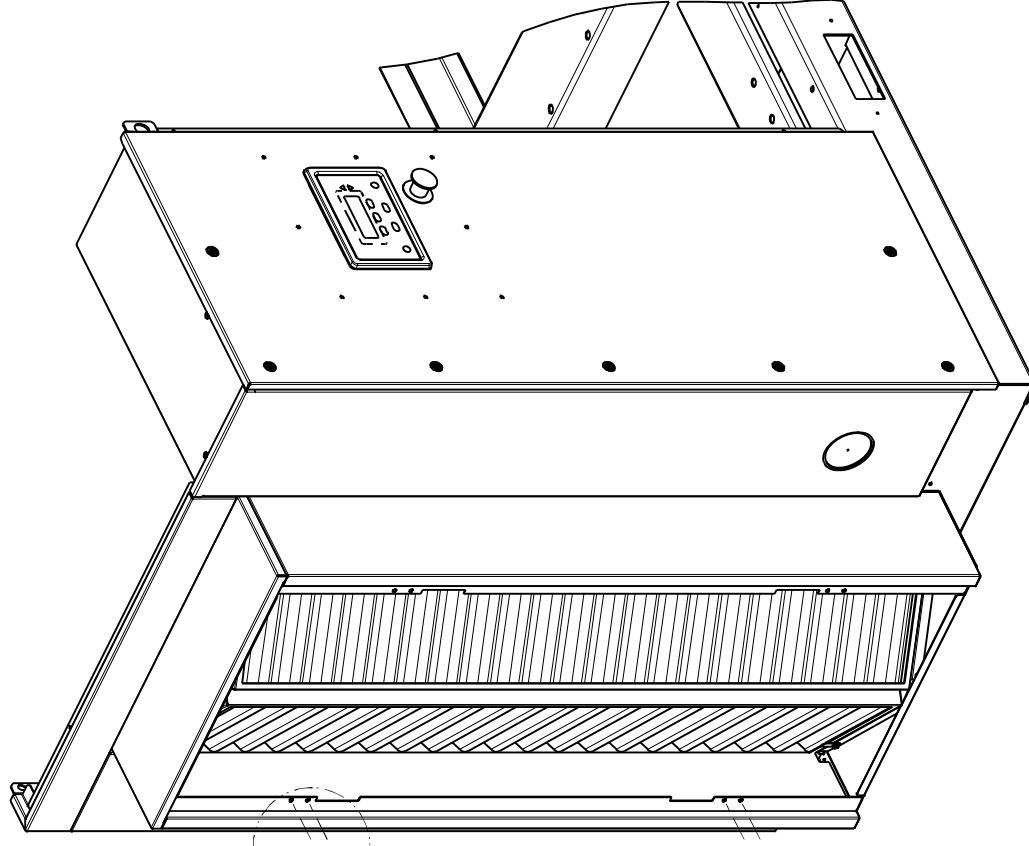
**ASSEMBLY INST., PRE FILTER
HI DUST**

REV

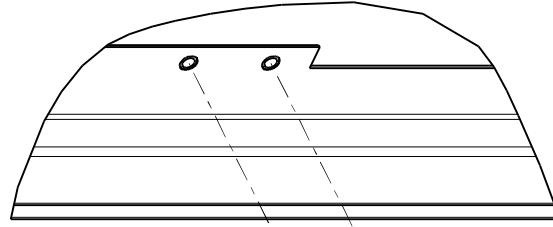
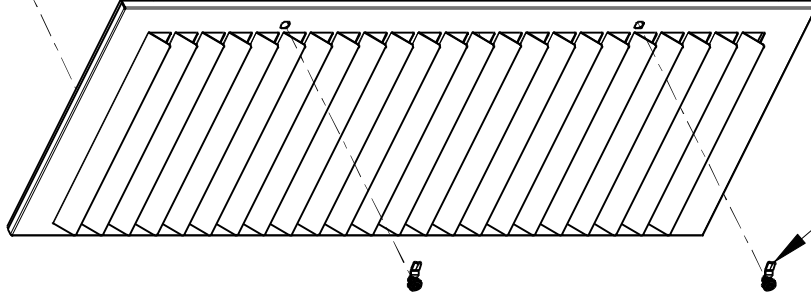
A

Item	Part No.	Description	Qty.
1	22159842	HINGE, PIN HALF	2
2	23180565	LATCH, DOOR (NEMA 4) 28mm HEAD / 24mm OFFSET	2
3	23516602	ASSEMBLY, PACKAGE INTAKE DOOR (WITH FOAM)	1
4	93580140	HINGE, PIN	2
5	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	4

Description
ASSEMBLE INTAKE DOOR



SEE DETAIL G



4
93580140
2X

1
22159842
2X

5
96743729
4X

3
23516602
1X

2
23180565
2X

DETAIL G
SCALE 0.300



Part Number : **23473044**

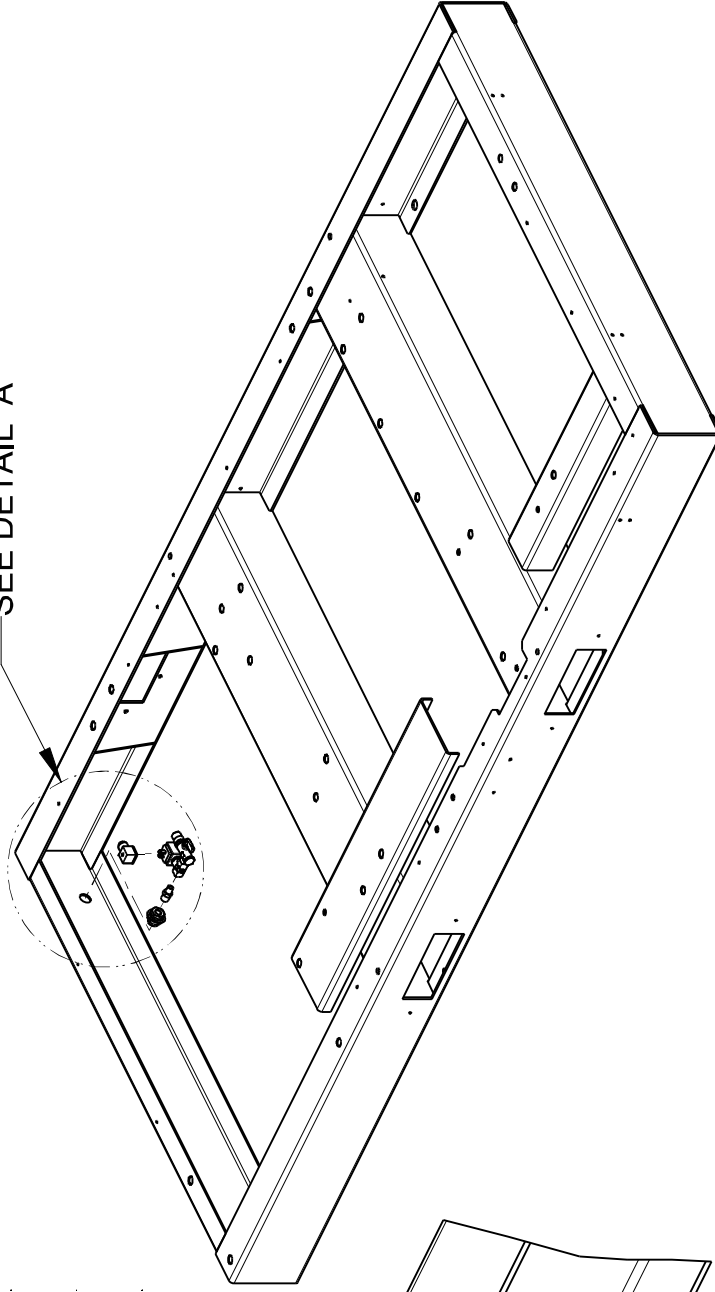
REV **B**
**ASSEMBLY INST., CONDENSATE
 (STANDARD)**

99

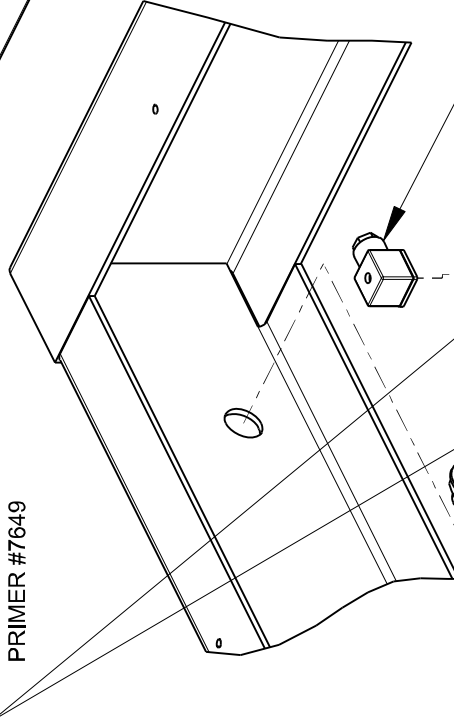
Item	Part No.	Description	Qty.
1	22219026	CONNECTOR, BULKHEAD .38NPT 1.12-14UN STRAIGHT THREAD OD	1
2	23434830	VALVE, SOLENOID DRAIN .50 BSPP IN, .25 NPT OUT	1
3	23532104	CABLE ASSEMBLY, 9SV	1
4	95916011	NIPPLE, .375 NPTF X .25 NPTF	1

Description
 ASSEMBLE SOLENOID VALVE AND BULK HEAD CONNECTOR

SEE DETAIL A



LOCTITE #545/
 PRIMER #7649



3
 23532104
 1X

2
 23434830
 1X

4
 95916011
 1X

1
 22219026
 1X

DETAIL A
 SCALE 0.200



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Part Number : **23473044**

100

Title :

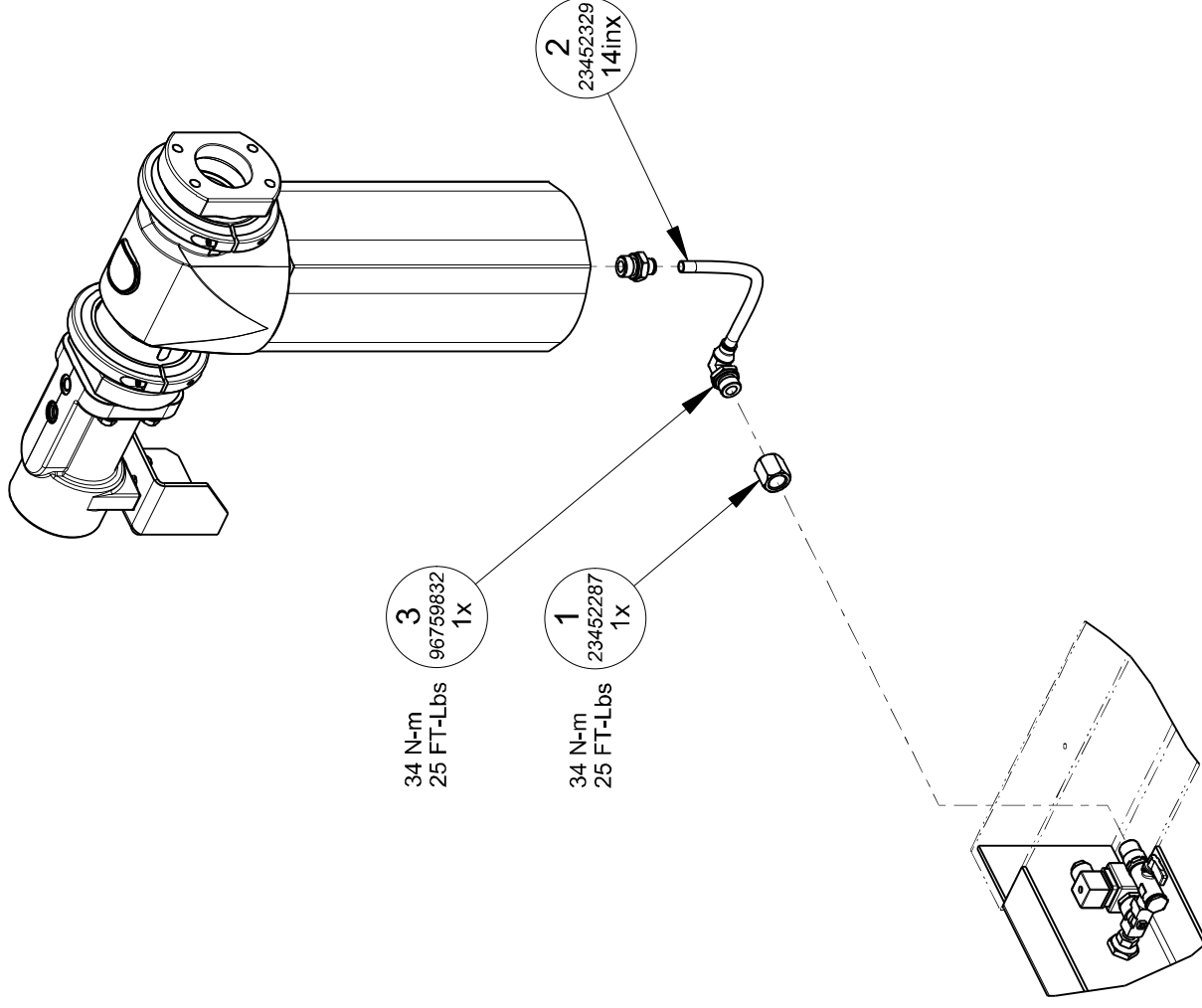
**ASSEMBLY INST., CONDENSATE
(STANDARD)**

REV

B

Description
ASSEMBLE 12MM NYLON TUBE

Item	Part No.	Description	Qty.
1	23452287	COUPLING, .50 BSPP	1
2	23452329	TUBE, 12 MM NYLON COLOR BLUE	14in
3	96759832	ELBOW, PUSH IN G1/2 X 12 MM TUBE	1





Part Number : **23473358**

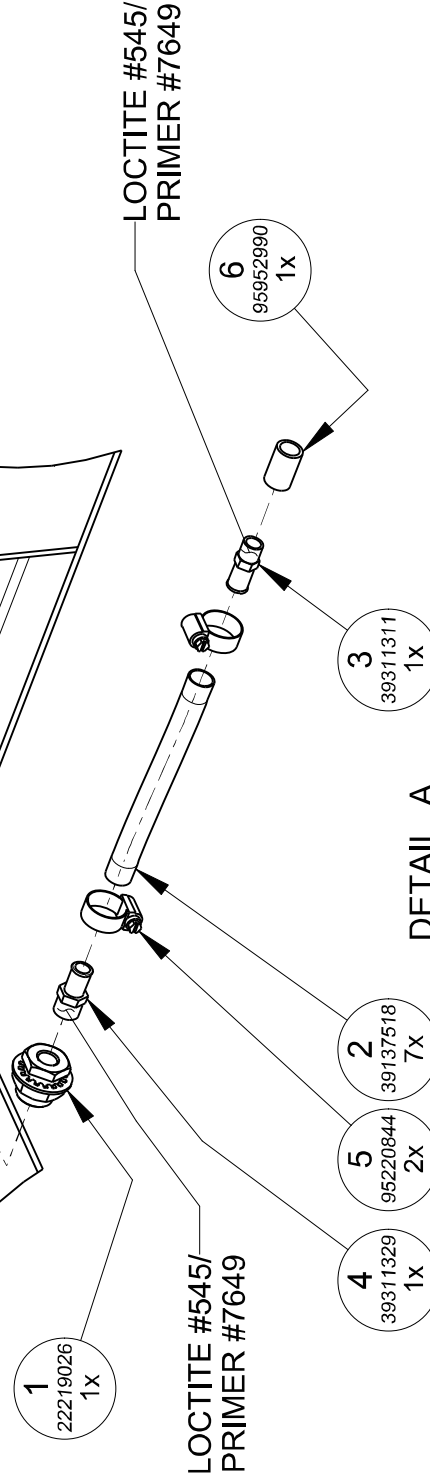
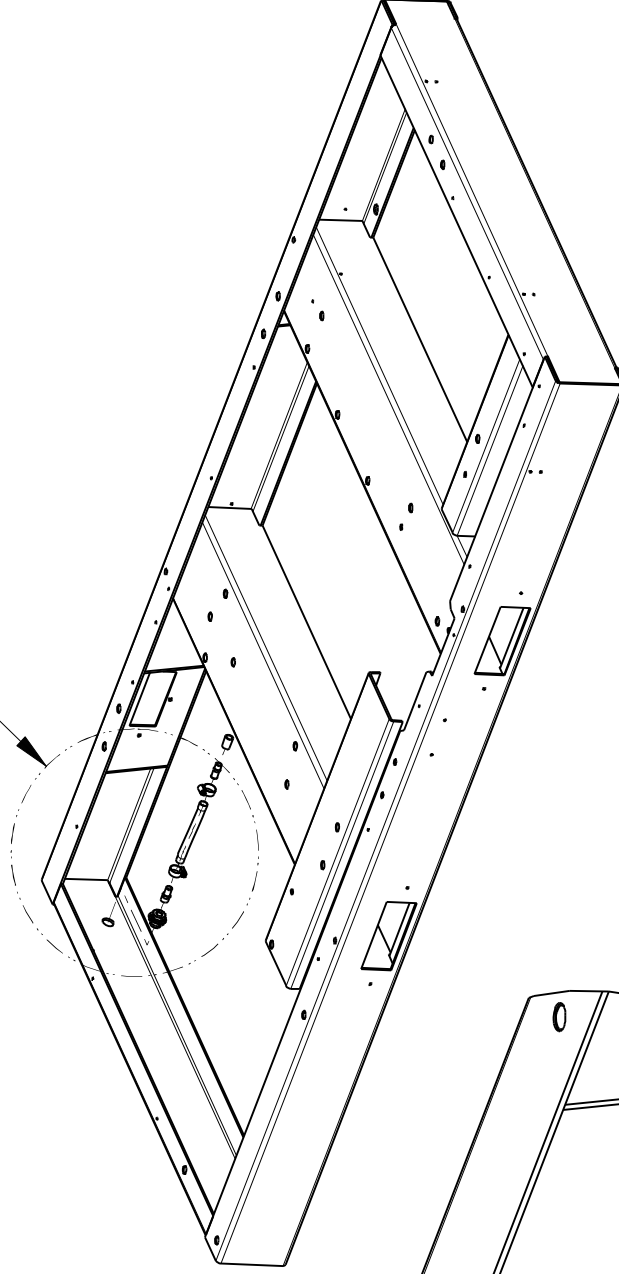
101

REV **B**
**ASSEMBLY INST., CONDENSATE
 (NO LOSS)**

Item	Part No.	Description	Qty.
1	22219026	CONNECTOR, BULKHEAD .38NPT 1.12-14UN STRAIGHT THREAD OD	1
2	39137518	TUBE, .50 SYN FLEX GRAY	7
3	39311311	STRAIGHT, BEADED HOSE BARB .38 PM X .50 HOSE	1
4	39311329	STRAIGHT, BEADED HOSE BARB .38 PM X .50 HOSE	1
5	95220844	CLAMP, HOSE WORM DRIVE STAINLESS STEEL	2
6	95952990	COUPLING, STANDARD .25 NPT X 1.13 LONG	1

Description
 ASSEMBLE BULK HEAD CONNECTOR AND SYN FLEX TUBE

SEE DETAIL A



DETAIL A
 SCALE 0.200



Part Number : **23473358**

102

Title :

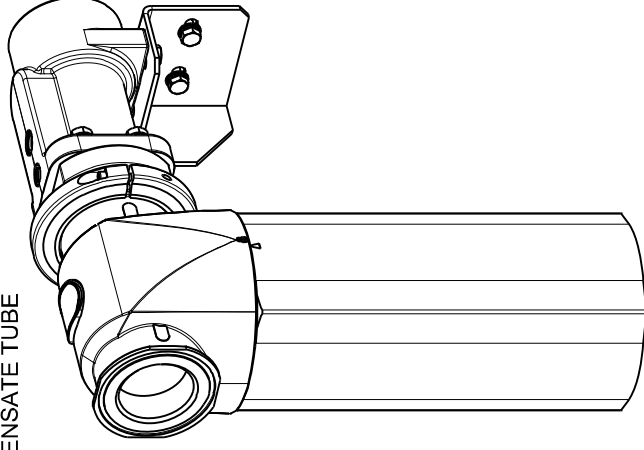
**ASSEMBLY INST., CONDENSATE
(NO LOSS)**

REV **B**

Item	Part No.	Description	Qty.
1	23434848	VALVE, NO-LOSS DRAIN B.I. BEKOMAT ENL 5 VARIO - BSPP	1
2	23472848	TUBE, 0.75 SS CODENSATE MOIST SEP TO VALVE	1
3	23529753	CABLE, 20-3 CONDUCTOR 600 VOLT	4.5
4	96760962	ELBOW, 90 - .50-14 BSPP, SS SIZE 12 ORFS, 18, 20MM TUBE END	1

Description

ASSEMBLE NO LOSS DRAIN VALVE AND CONDENSATE TUBE



75 N-m
55 Ft-Lbs

2
23472848
1X

LOCTITE #545/
PRIMER #7649

3
23529753
4.5X

4
96760962
1X

1
23434848
1X

REFER "CONTROLS" INSTRUCTION SHEET FOR CABLE ROUTING

ONE CHANNEL OF THE BASE HAS BEEN BLANKED FOR BETTER CLARITY



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103

Part Number :

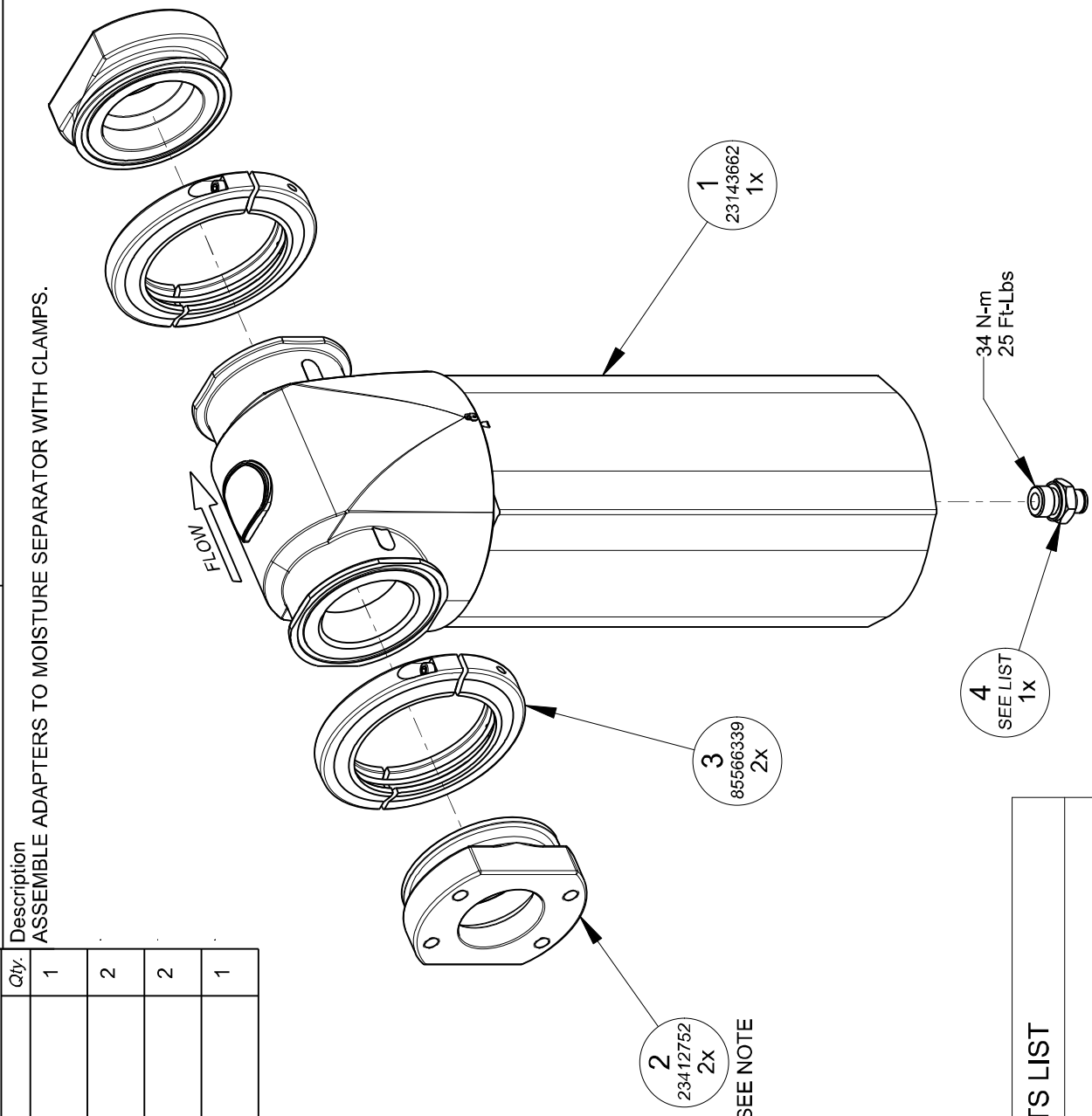
23464191

Title :

**ASSEMBLY INST., CUST.
CONNECTION / MOIST. SEP**

REV
C

Item	Part No.	Description	Qty.	Description
1	23143662	SEPARATOR, MOISTURE 2.5 INCH NPT	1	ASSEMBLE ADAPTERS TO MOISTURE SEPARATOR WITH CLAMPS.
2	23412752	ADAPTER, 64MM ISO 6162 X SIZE 5 COUPLER FLANGE	2	
3	85566339	CLAMP, FILTER - SIZE M5-M8 (DWG. #23327166)	2	
4	SEE LIST	CONNECTOR, PUSH IN G1/2 X 12 MM TUBE	1	



NOTE: ORIENTATION OF ADAPTER

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
4	96763073	CONNECTOR, (USED ON STANDARD CONDENSATE)
	96761697	CONNECTOR, (USED ON NO-LOSS DRAIN VALVE)



Part Number : **23464191**

104

Title :

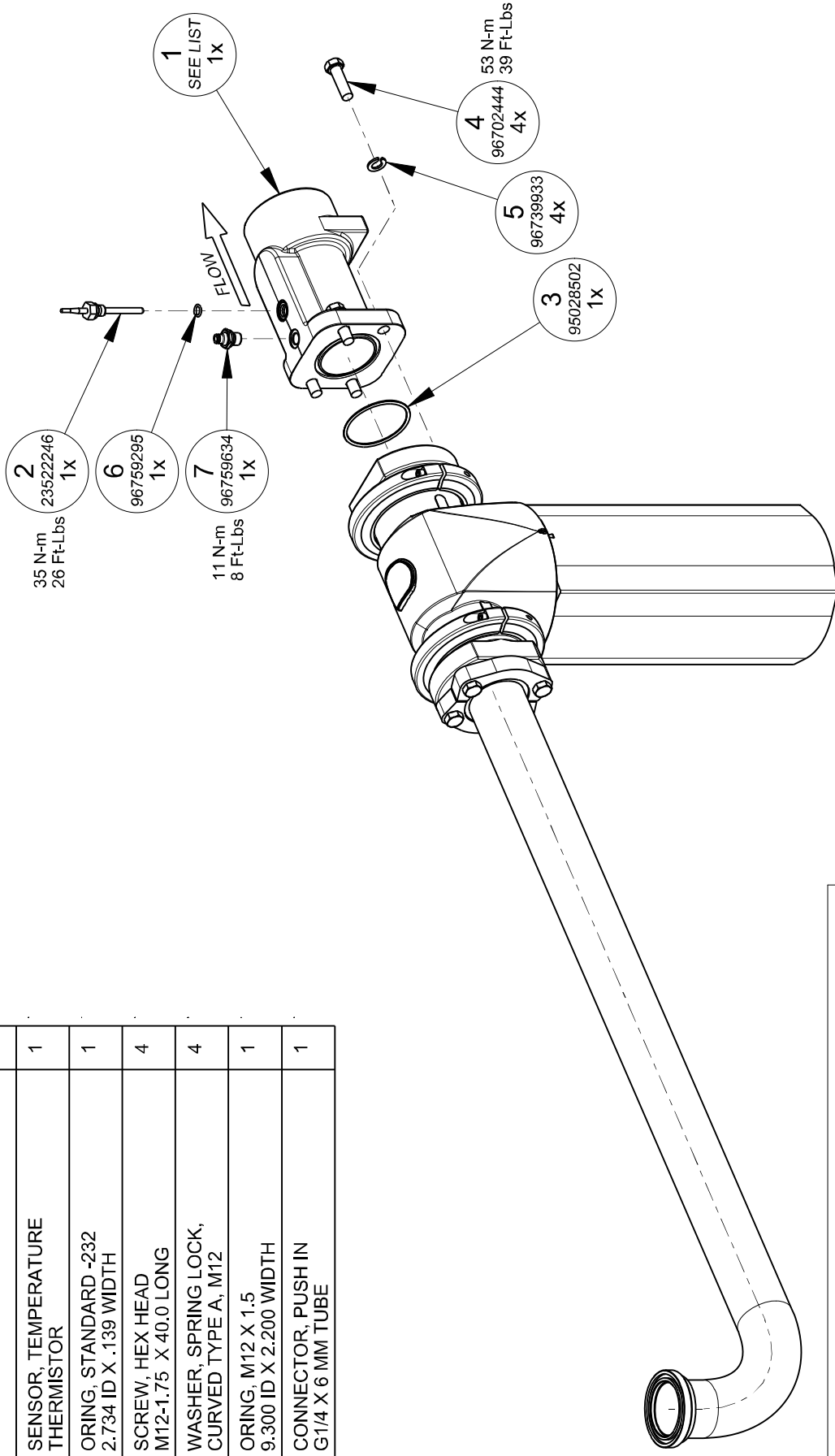
ASSEMBLY INST., CUST. CONNECTION / MOIST. SEP

REV **C**

Item Part No. Description Qty.

1	SEE LIST	CUSTOMER, CONNECTION 64MM	1
2	23522246	SENSOR, TEMPERATURE THERMISTOR	1
3	95028502	ORING, STANDARD -232 2.734 ID X .139 WIDTH	1
4	96702444	SCREW, HEX HEAD M12-1.75 X 40.0 LONG	4
5	96739933	WASHER, SPRING LOCK, CURVED TYPE A, M12	4
6	96759295	ORING, M12 X 1.5 9.300 ID X 2.200 WIDTH	1
7	96759634	CONNECTOR, PUSH IN G1/4 X 6 MM TUBE	1

Description
ASSEMBLE CUSTOMER CONNECTION PORT TO MOISTURE SEPARATOR AND MOUNT BRACKET.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
2	23435373	CUSTOMER, CONNECTION 2.5" NPT
	23435381	CUSTOMER, CONNECTION 2.5" BSPT
	23438641	CUSTOMER, CONNECTION 2.5" BSPT WITH SAFETY VALVE (SEE SHEET 6)



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Industrial Technologies

105

Part Number :

23464191

Title :

**ASSEMBLY INST., CUST.
CONNECTION / MOIST. SEP**

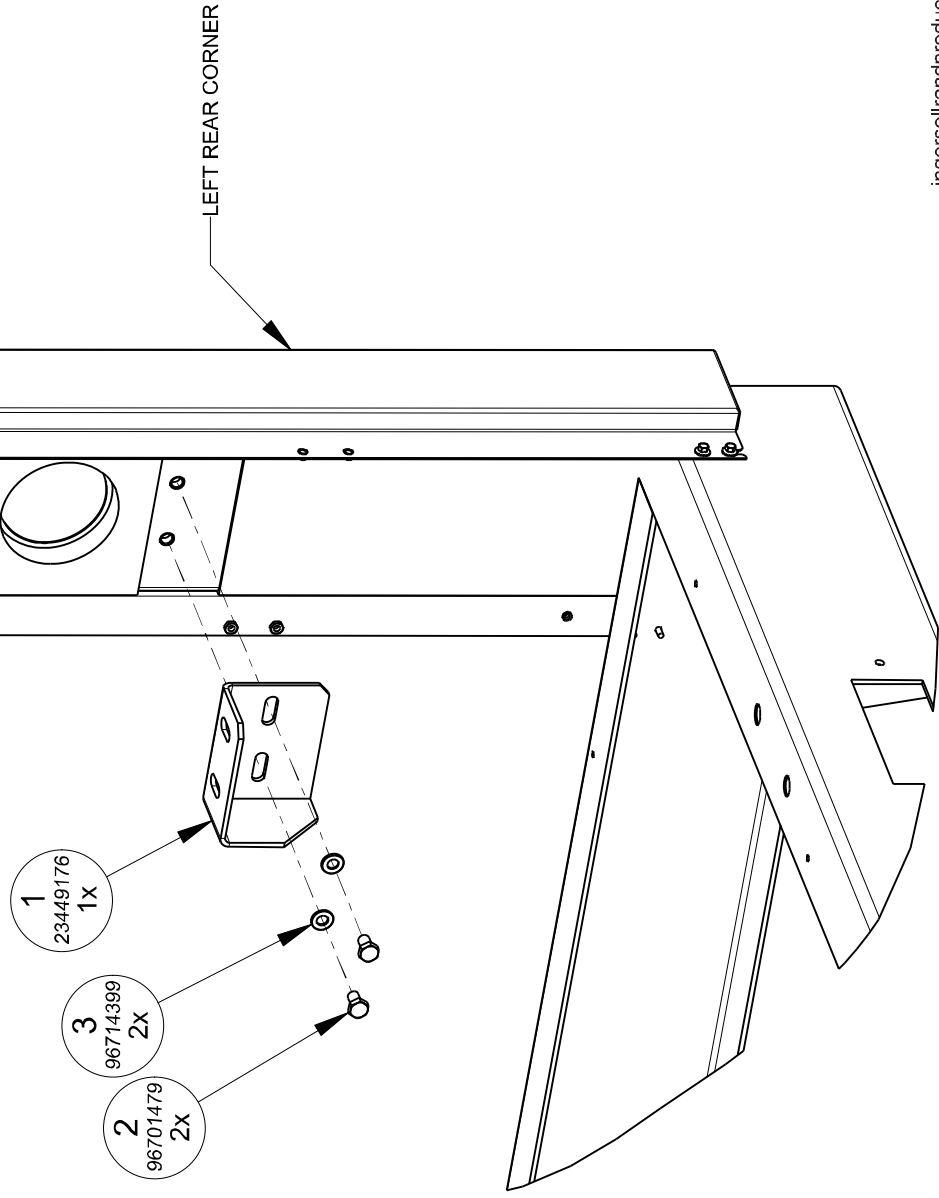
REV

C

Item	Part No.	Description	Qty.
1	23449176	SUPPORT, AIR DISCHARGE PIPING	1
2	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	2
3	96714399	WASHER, PRODUCT GRADE A M10	2

Description

ASSEMBLE COLUMN TO BASE AND BRACKET TO COLUMN.





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106

Part Number :

23464191

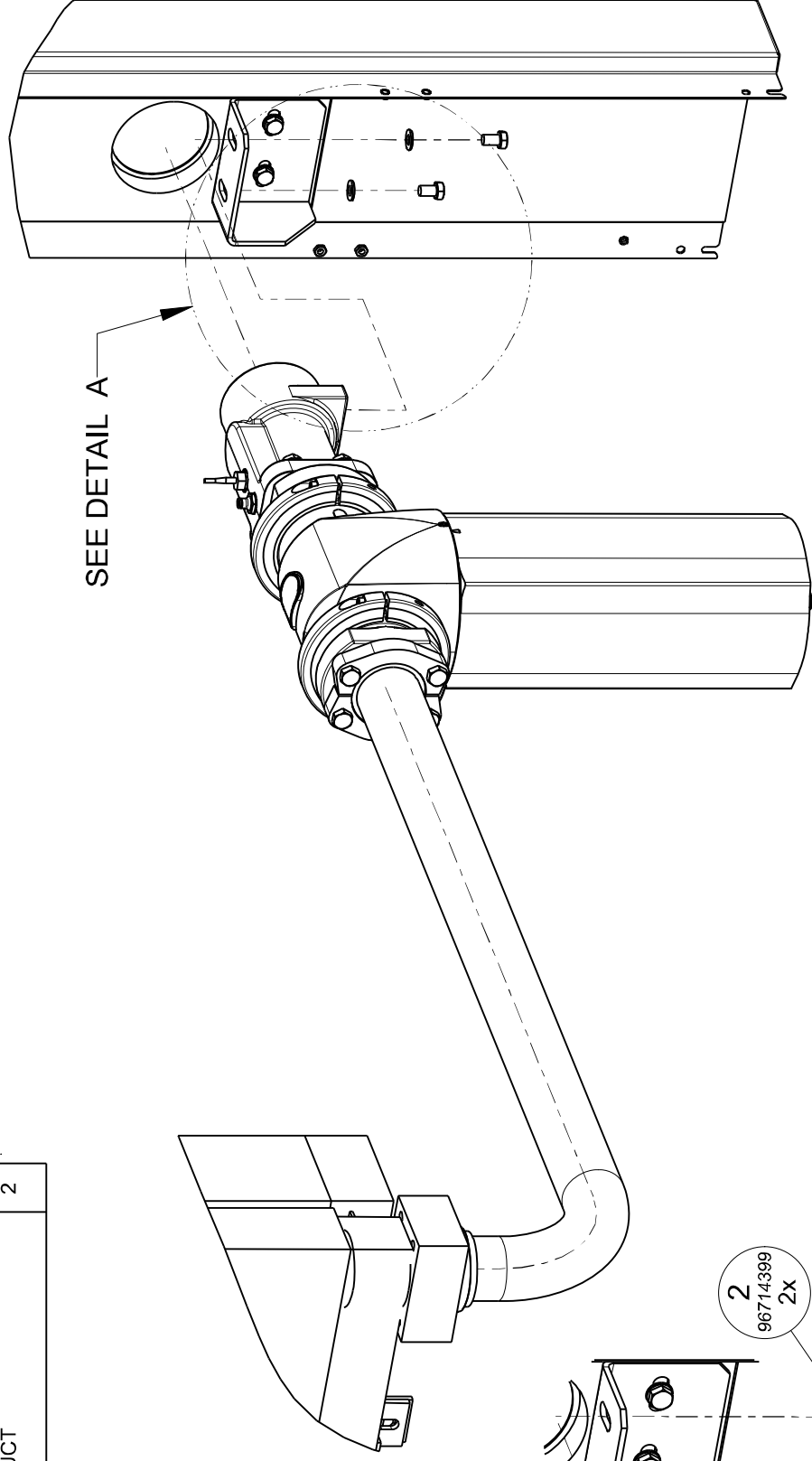
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**ASSEMBLY INST., CUST.
CONNECTION / MOIST. SEP**

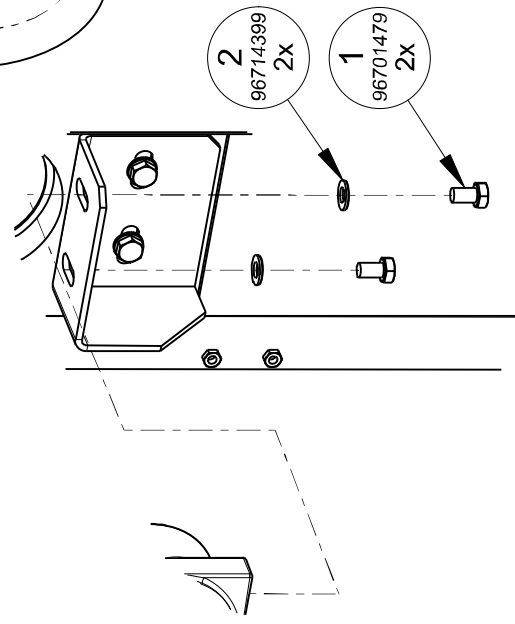
REV **C**

Description
ATTACH CUSTOMER CONNECTION TO BRACKET AND AIR DISCHARGE TUBE TO COOLER.

Item	Part No.	Description	Qty.
1	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	2
2	96714399	WASHER, PRODUCT GRADE A M10	2



SEE DETAIL A



DETAIL A
SCALE 0.200



Ingersoll Rand
Industrial Technologies

Part Number : **23464191**

107

Title :

**ASSEMBLY INST., CUST.
CONNECTION / MOIST. SEP**

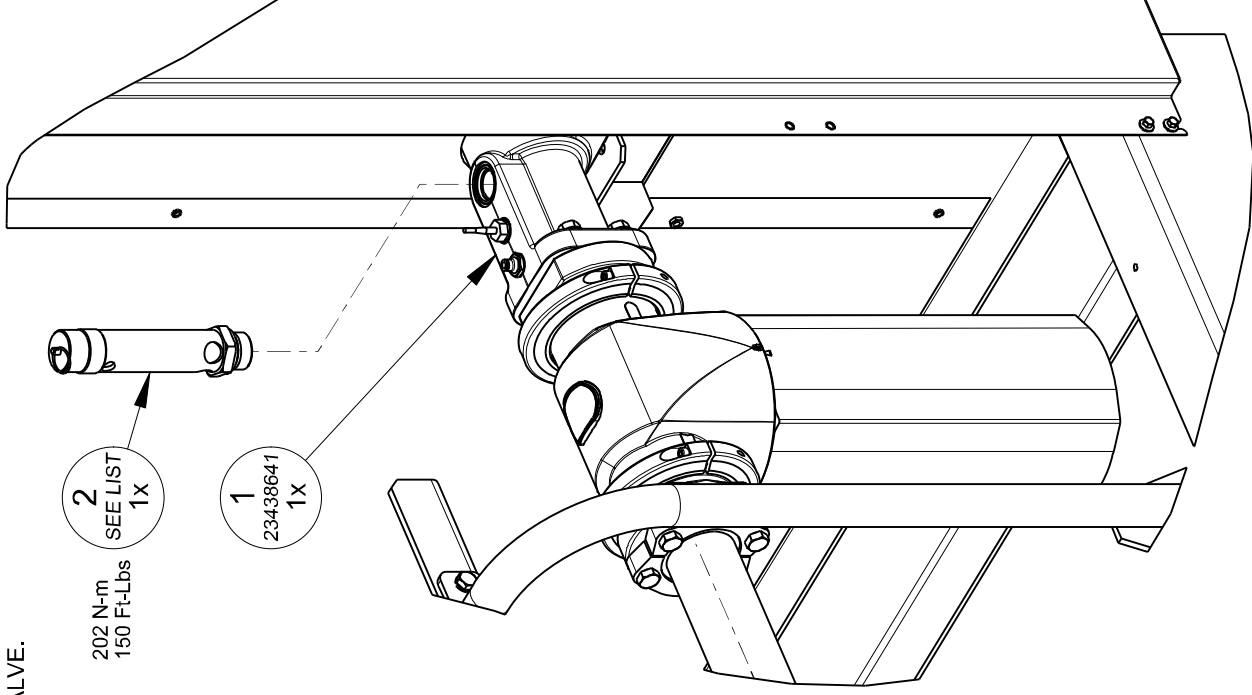
REV **C**

Item	Part No.	Description	Qty.	Description
1	23438641	CUSTOMER CONNECTION 64MM ISO 6162 X 2.5 FEMALE BSPT W/SAFETY	1	BSPT WITH SAFETY VALVE.
2	SEE LIST	VALVE, PRESSURE RELIEF	1	

202 N-m
150 Ft-Lbs

2
SEE LIST
1X

1
23438641
1X



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION
2	23443708	VALVE, PRESSURE RELIEF 8.5 BAR GB M33
	23443716	VALVE, PRESSURE RELIEF 9.5 BAR GB M33
	23443724	VALVE, PRESSURE RELIEF 11 BAR GB M33
	23443732	VALVE, PRESSURE RELIEF 15.4 BAR GB M33



Part Number : **23472582**

Title : **ASSEMBLY INST.,
STARTER BOX**

REV **C**

108

Description
ASSEMBLE STARTER BOX ASSEMBLY TO BASE.

Item	Part No.	Description	Qty.
1	SEE LIST	STARTER BOX, 90-110KW	1
2	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	4
3	96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG	4

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	23527179	STARTER ASSY, VSD 90kW 460V 60Hz A/C	1
1	23527153	STARTER ASSY, VSD 90kW 575V 60Hz A/C	1
1	23532823	STARTER ASSY, VSD 90kW 440V 60Hz A/C (LA)	1
1	23527187	STARTER ASSY, VSD 90kW 400V 50Hz A/C	1
1	23527211	STARTER ASSY, VSD 90kW 460V 60Hz W/C	1
1	23527203	STARTER ASSY, VSD 90kW 575V 60Hz W/C	1
1	23532831	STARTER ASSY, VSD 90kW 440V 60Hz W/C (LA)	1
1	23527229	STARTER ASSY, VSD 90kW 400V 50Hz W/C	1
1	23465446	STARTER ASSY, VSD 110kW 460V 60Hz A/C	1
1	23465438	STARTER ASSY, VSD 110kW 575V 60Hz A/C	1
1	23532849	STARTER ASSY, VSD 110kW 440V 60Hz A/C (LA)	1
1	23465453	STARTER ASSY, VSD 110kW 400V 50Hz A/C	1
1	23465487	STARTER ASSY, VSD 110kW 460V 60Hz W/C	1
1	23465479	STARTER ASSY, VSD 110kW 575V 60Hz W/C	1
1	23532856	STARTER ASSY, VSD 110kW 440V 60Hz W/C (LA)	1
1	23465495	STARTER ASSY, VSD 110kW 400V 50Hz W/C	1
1	23465529	STARTER ASSY, Y/D 90-110kW 460V 60Hz A/C	1
1	23465511	STARTER ASSY, Y/D 90-110kW 575V 60Hz A/C	1
1	23463391	STARTER ASSY, Y/D 90-110kW 400V 50Hz A/C	1
1	23465552	STARTER ASSY, Y/D 90-110kW 460V 60Hz W/C	1
1	23465545	STARTER ASSY, Y/D 90-110kW 575V 60Hz W/C	1
1	23465560	STARTER ASSY, Y/D 90-110kW 400V 50Hz W/C	1
1	23465594	STARTER ASSY, S.S. 90-110kW 460V 60Hz A/C	1
1	23465586	STARTER ASSY, S.S. 90-110kW 575V 60Hz A/C	1
1	23465602	STARTER ASSY, S.S. 90-110kW 380-480V 50Hz A/C	1
1	23465636	STARTER ASSY, S.S. 90-110kW 460V 60Hz W/C	1

SEE SHEET-3

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	23465628	STARTER ASSY, S.S. 90-110kW 575V 60Hz W/C	1
1	23465644	STARTER ASSY, S.S. 90-110kW 380-480V 50Hz W/C	1



Part Number : 23472582

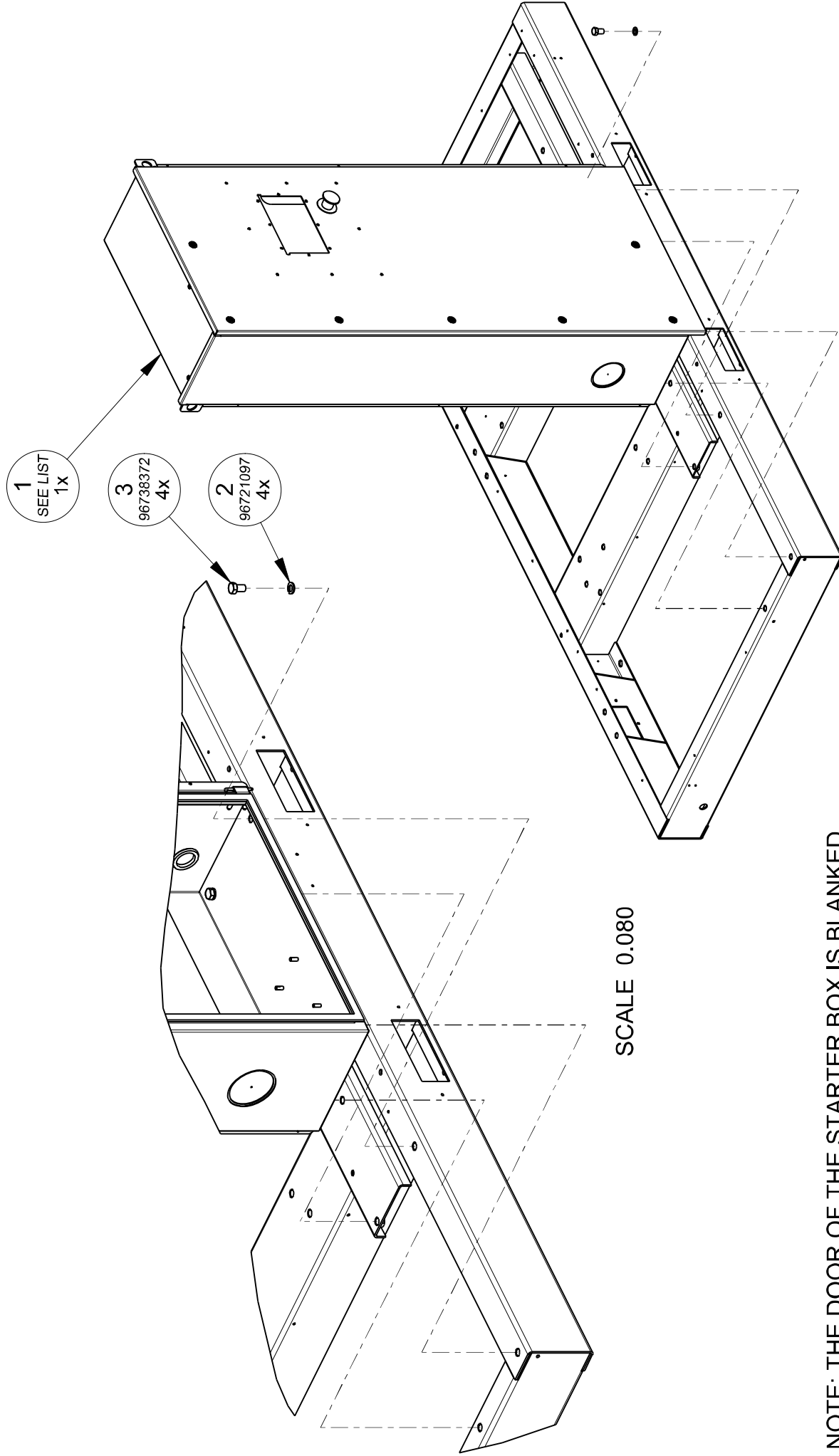
ASSEMBLY INST., STARTER BOX

REV
C

109

Title :

Item	Part No.	Description	Qty.	Description
				ASSEMBLE STARTER BOX ASSEMBLY TO BASE. CONTINUED



NOTE: THE DOOR OF THE STARTER BOX IS BLANKED FOR BETTER CLARITY IN PARTIAL VIEW.



Part Number : 23472582

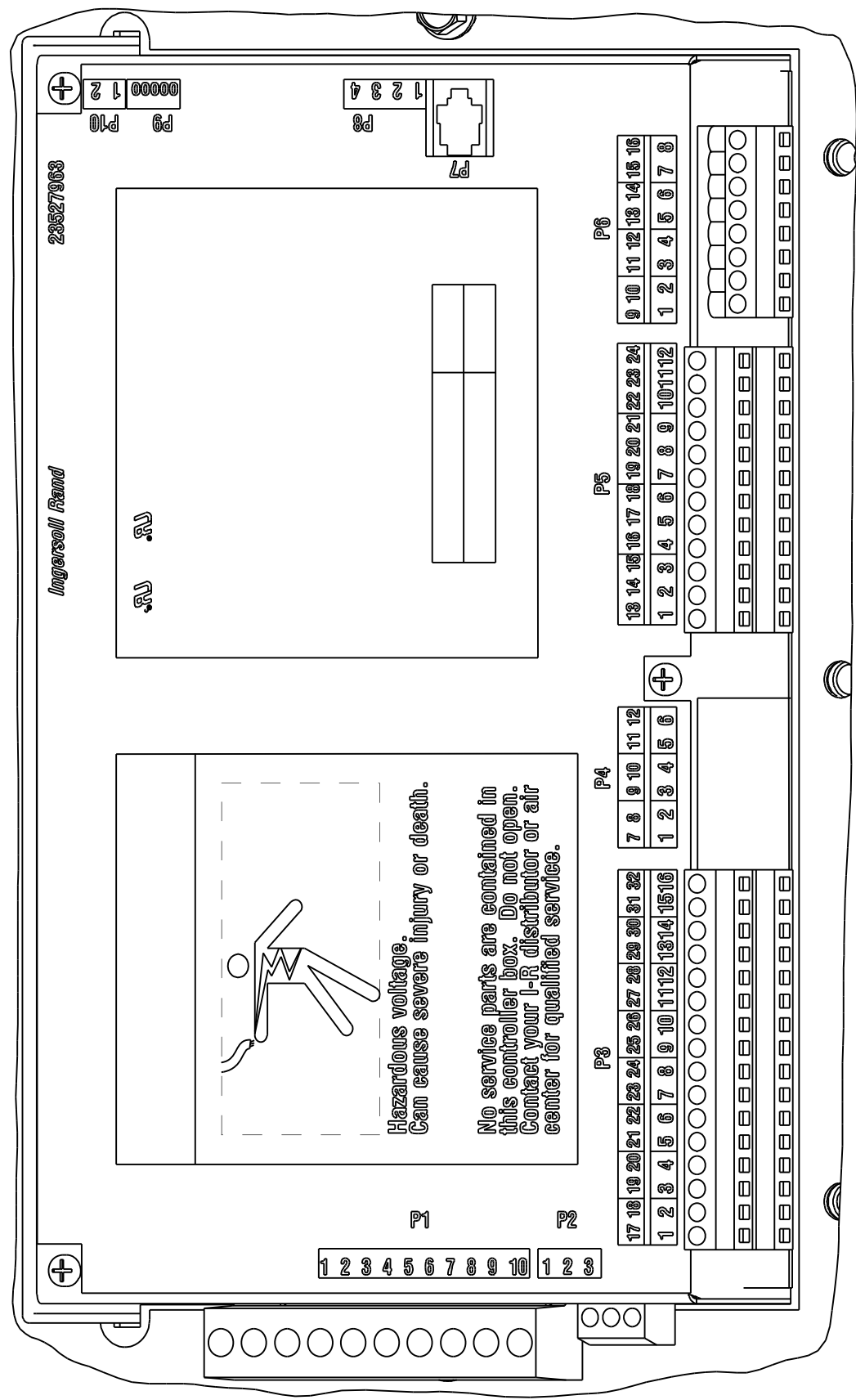
111

REV C

ASSEMBLY INST., STARTER BOX

Description
SHOWING CONNECTION OF THE PLUG CONNECTIONS TO BACK SIDE OF THE CONTROLLER.

Item	Part No.	Description	Qty.



WHEN INSTALLING THE CONNECTORS IN THE CONTROLLER, THE LOWER NUMBERED PINS ARE LOCATED CLOSER TO THE SHEETMETAL OF THE DOOR. THE HIGHER NUMBERED PINS ARE LOCATED CLOSER TO THE DECAL OF THE CONTROLLER.



Part Number : 23472582

112

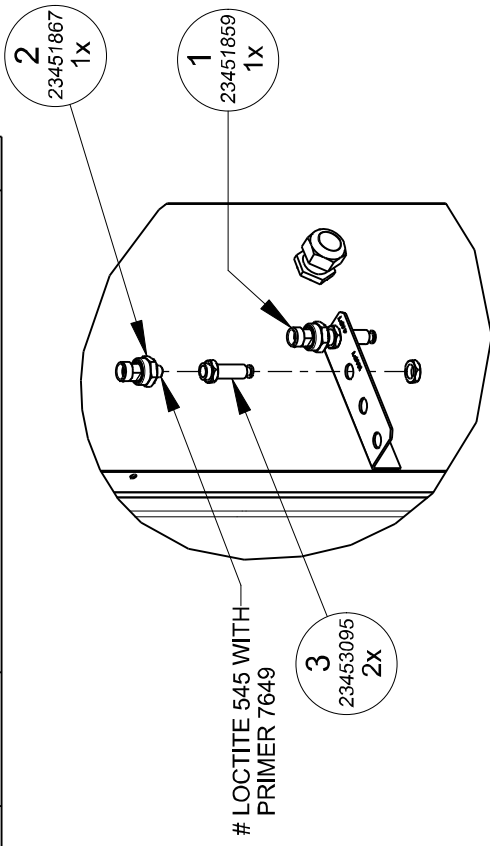
ASSEMBLY INST., STARTER BOX

Title :

REV
C

Description
ASSEMBLE PRESSURE TRANSDUCERS TO STARTER BOX BRACKET.

Item	Part No.	Description	Qty.
1	23451859	TRANSDUCER, PRESSURE 225 PSI, 5 VDC	1
2	23451867	TRANSDUCER, VACUUM 0-15 PSIG	1
3	23453095	BULKHEAD, FEMALE UNION	2



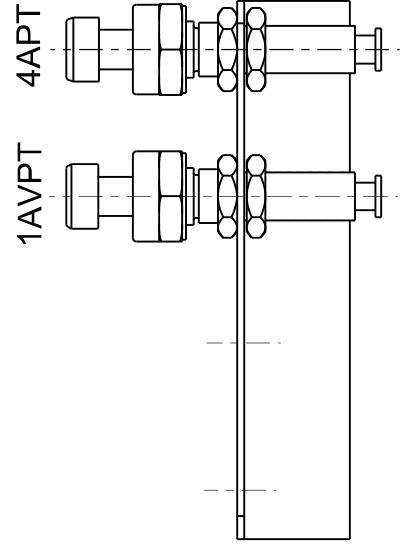
LOCTITE 545 WITH
PRIMER 7649

2
23451867
1X

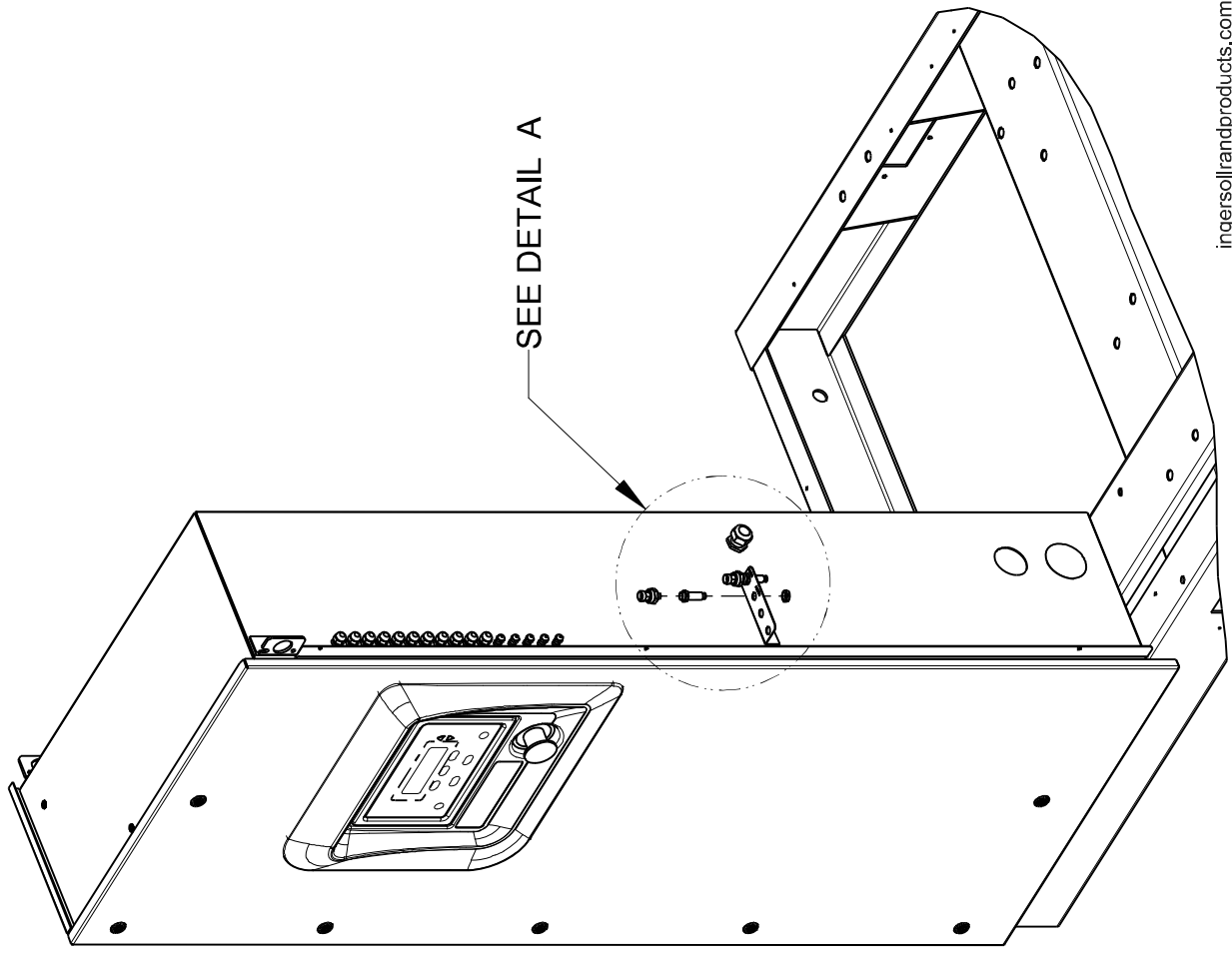
1
23451859
1X

3
23453095
2X

DETAIL A
SCALE 0.150



SCALE 0.500





Part Number : 23472582

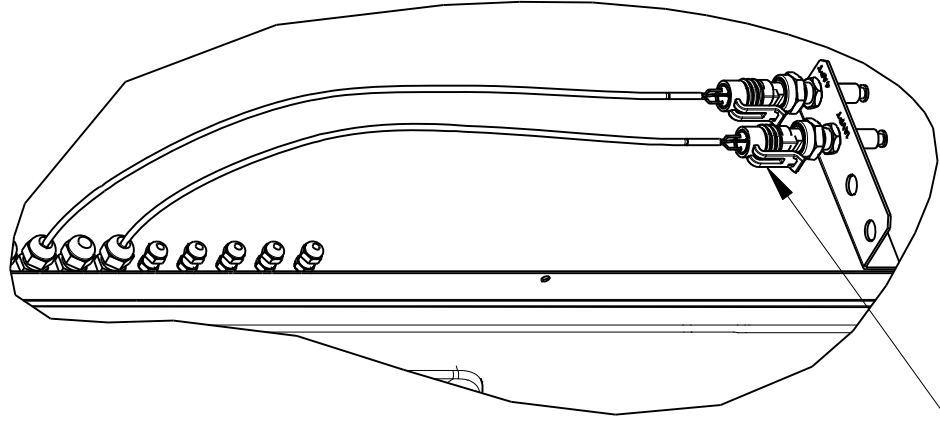
113

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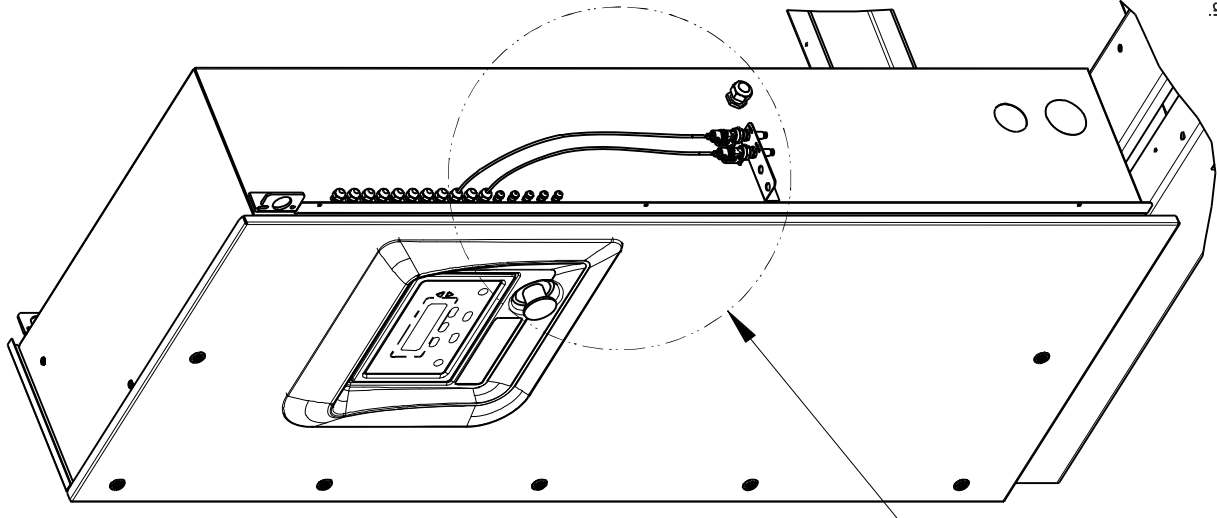
**ASSEMBLY INST.,
STARTER BOX**

REV
C

Item	Part No.	Description	Qty.	Description
1	39875570	CABLE, TRANSDUCER INTELLISYS SG	2	ASSEMBLE TRANSDUCER AND ROUTE CABLES THROUGH CABLE GLANDS.



1
39875570
2X



SEE DETAIL B

DETAIL B
SCALE 0.200



Part Number : 23472582

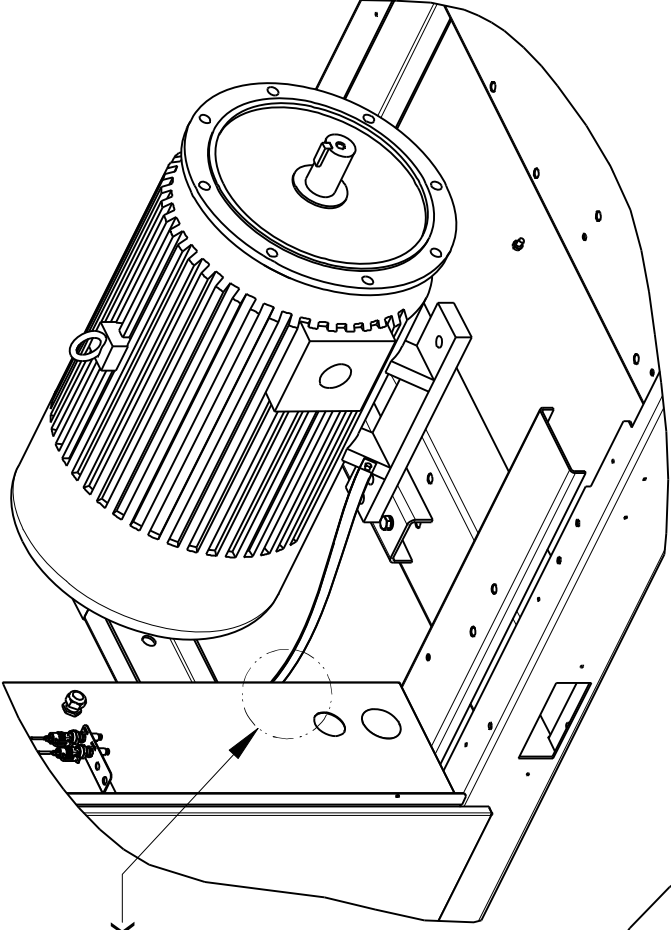
ASSEMBLY INST., STARTER BOX

REV
C

114

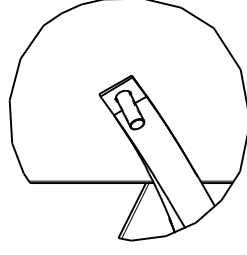
Title :

Item	Part No.	Description	Qty.	Description
				ASSEMBLE GROUND STRAPS TO BACK OF STARTER BOX.

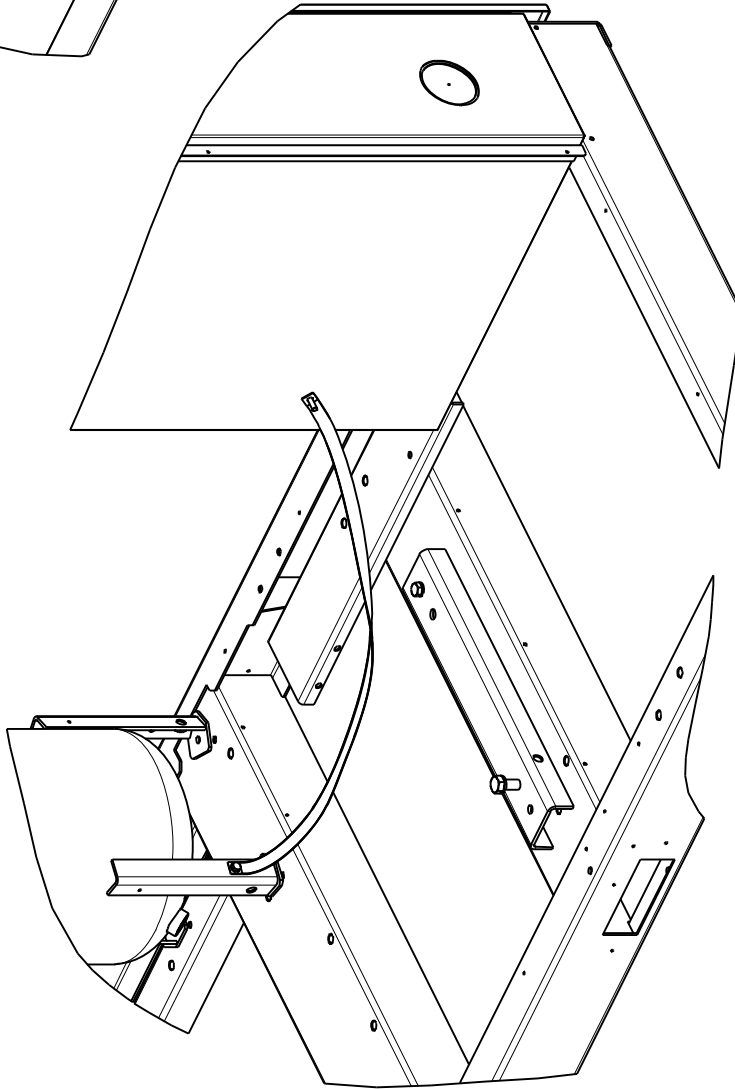


SEE MOUNTING DETAIL VIEW X

FIXED SPEED
MOTOR TO STARTER BOX



VIEW X-X
SCALE 0.200



SEPARATOR TANK TO STARTER BOX



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Industrial Technologies

115

Part Number :

23472582

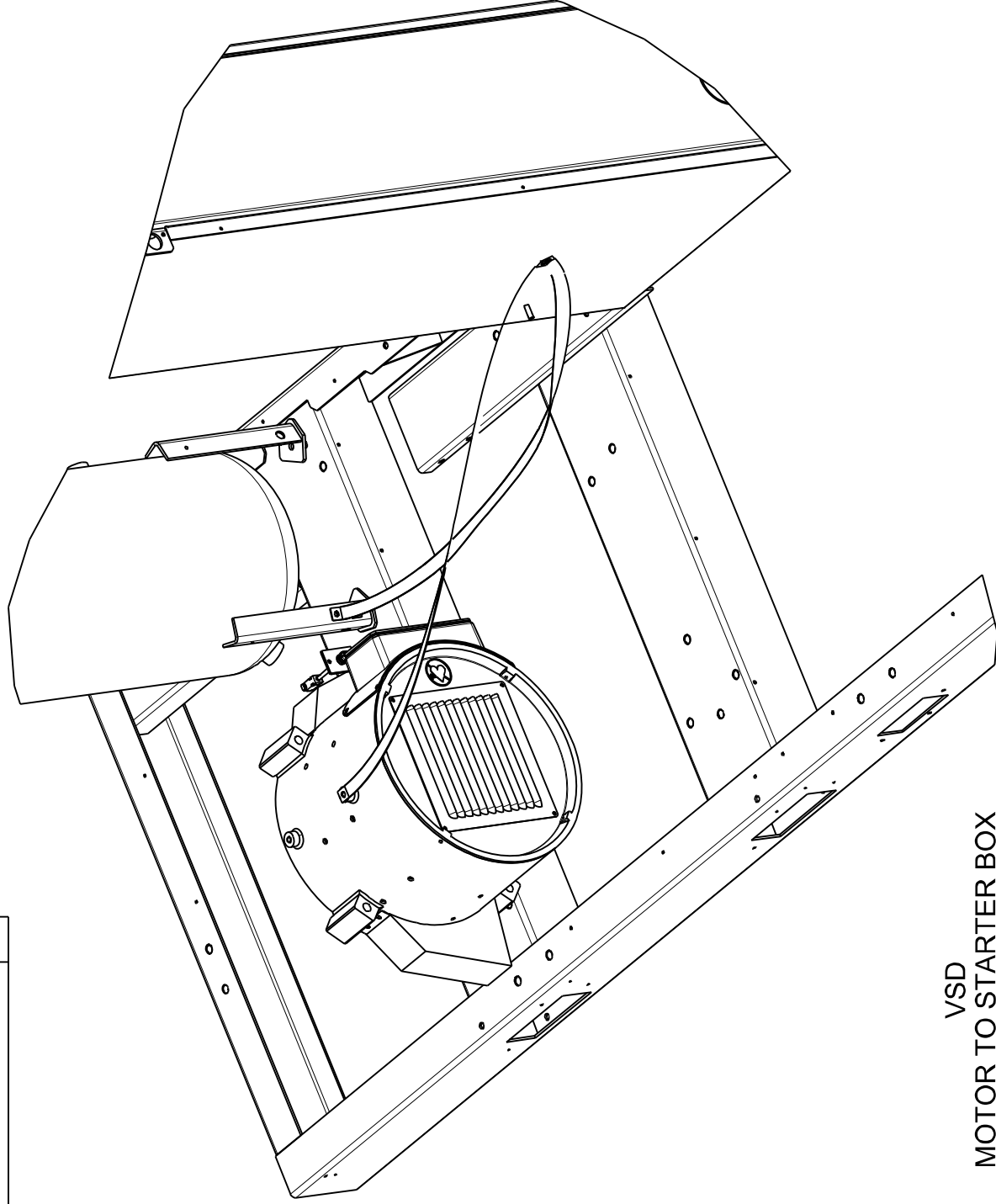
Title :

**ASSEMBLY INST.,
STARTER BOX**

REV

C

Item	Part No.	Description	Qty.	Description
				ASSEMBLE GROUND STRAPS TO BACK OF STARTER BOX.



VSD
MOTOR TO STARTER BOX



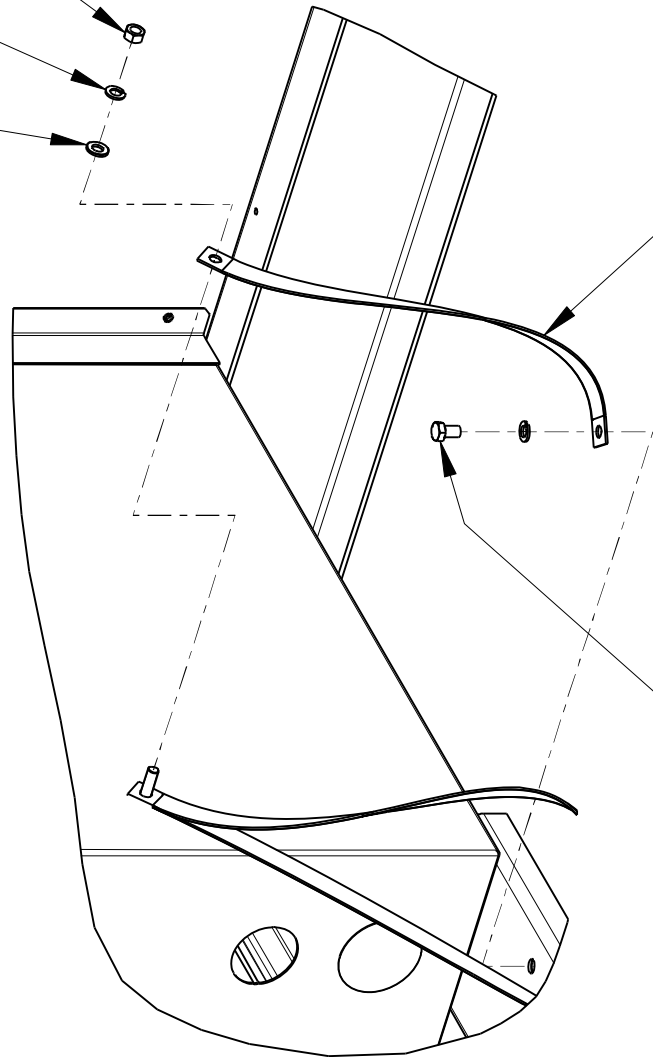
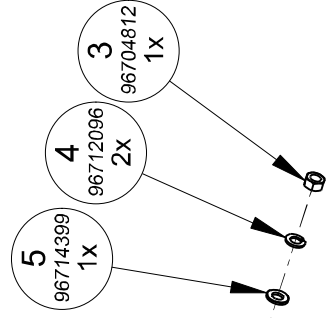
Part Number : 23472582

116

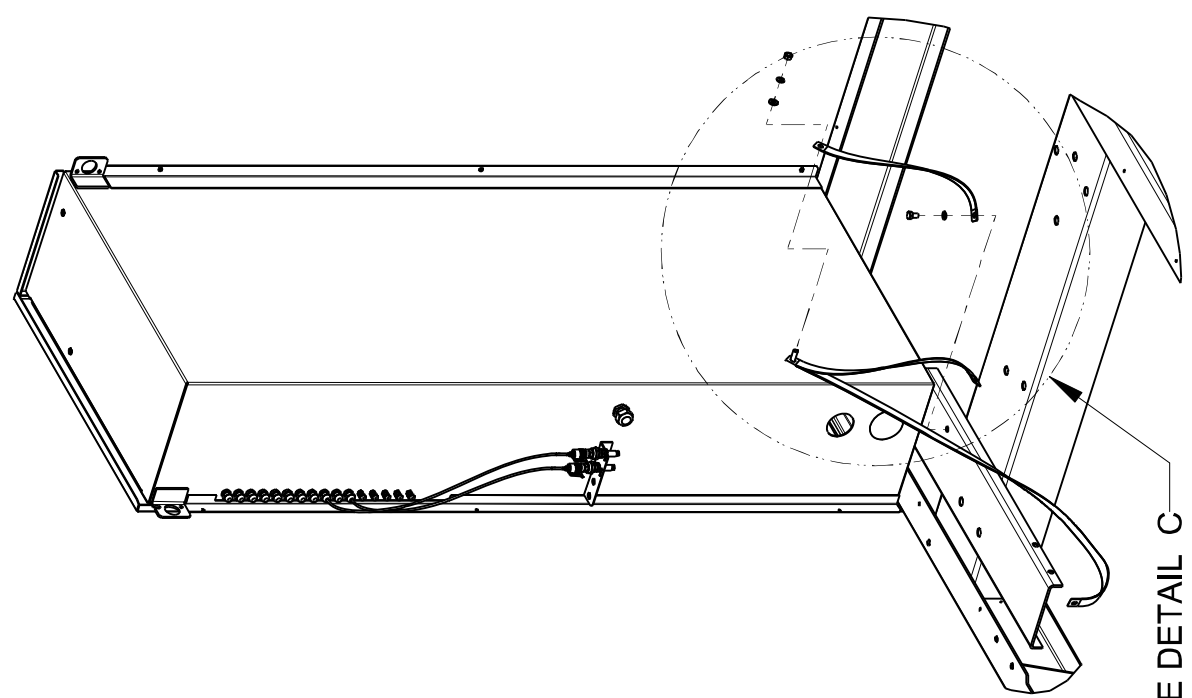
ASSEMBLY INST., STARTER BOX

REV
C

Item	Part No.	Description	Qty.	Description
1	54732144	STRAP, EARTH GROUND 900MM LONG	1	ASSEMBLE GROUND STRAP FROM STARTER BOX TO BASE
2	96701479	SCREW, HEX HEAD M10-1.50 X 16.0 LONG	1	
3	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	1	
4	96712096	WASHER, SPRING LOCK, CURVED TYPE A, M10	2	
5	96714399	WASHER, PRODUCT GRADE A M10	1	



DETAIL C
SCALE 0.150



SEE DETAIL C



Part Number : **23472582**

117

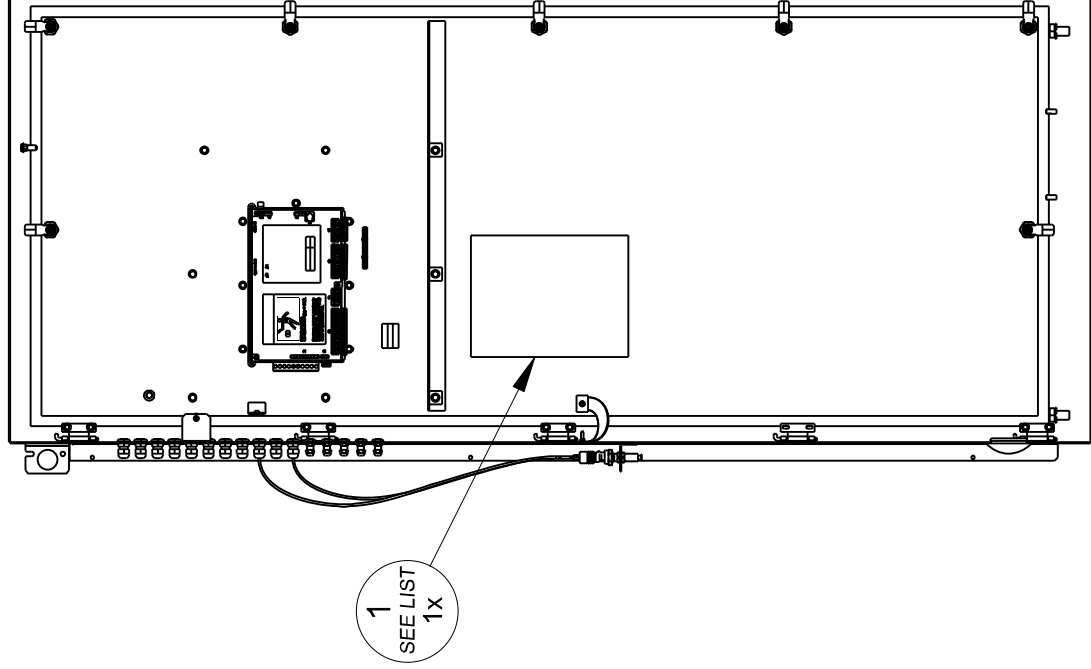
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Industrial Technologies

**ASSEMBLY INST.,
STARTER BOX**

REV **C**

Item	Part No.	Description	Qty.
1	SEE LIST	SCHEMATIC, ELECTRICAL WIRING	1

Description
ASSEMBLE DECALS TO SHOW THE WIRING DIAGRAM DETAILS.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	23771933	SCHEMATIC, ELECTRICAL WIRING (FIXED SPEED - Y/D)	1
1	23382245	SCHEMATIC, ELECTRICAL WIRING (VSD)	1
1	23378540	SCHEMATIC, ELECTRICAL WIRING (FIXED SPEED - SOFT STARTER)	1



Part Number : **23475502**

118

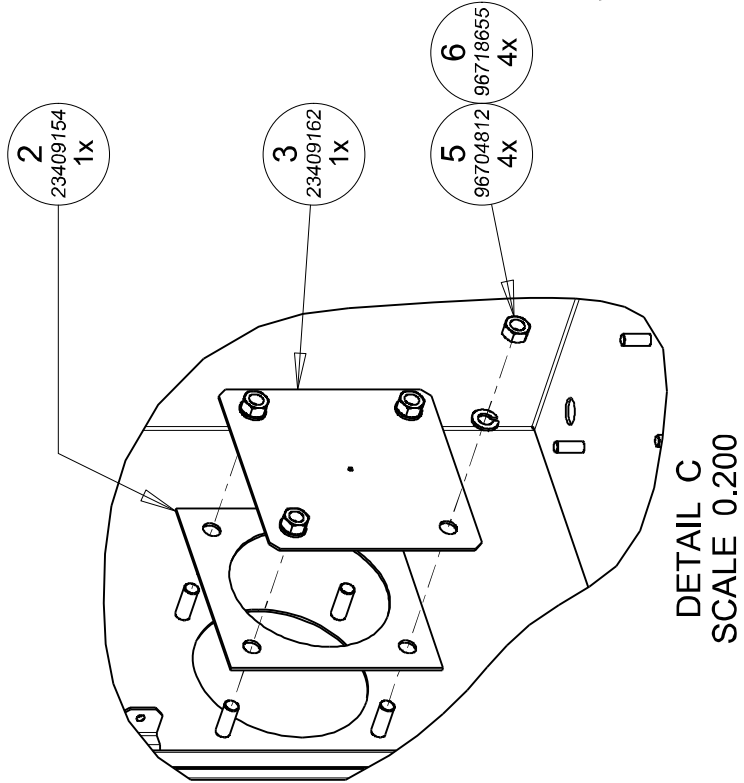
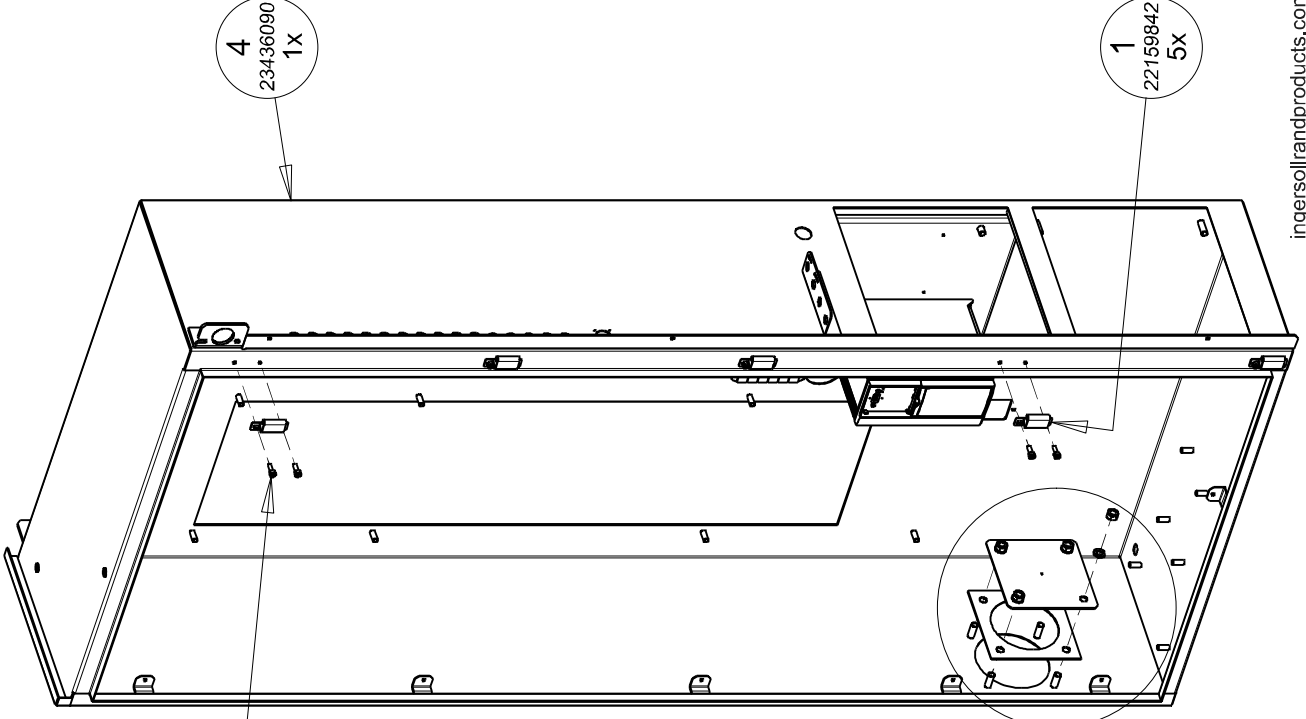
**STARTER BOX, 110KW
(VSD)**

Title :

REV **C**

Item	Part No.	Description	Qty.
1	22159842	HINGE, PIN HALF	5
2	23409154	GASKET, POWER-IN PLATE STARTER BOX	1
3	23409162	PLATE, STARTER BOX POWER	1
4	23436090	ENCLOSURE, STARTER BOX (VSD)	1
5	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	4
6	96718655	WASHER, SPRING LOCK, CURVED TYPE A, M10	4
7	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	10

Description
ASSEMBLE VSD DRIVE ENCLOSURE STARTER BOX



SEE DETAIL C

DETAIL C
SCALE 0.200



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Industrial Technologies

119

Part Number :

23475502

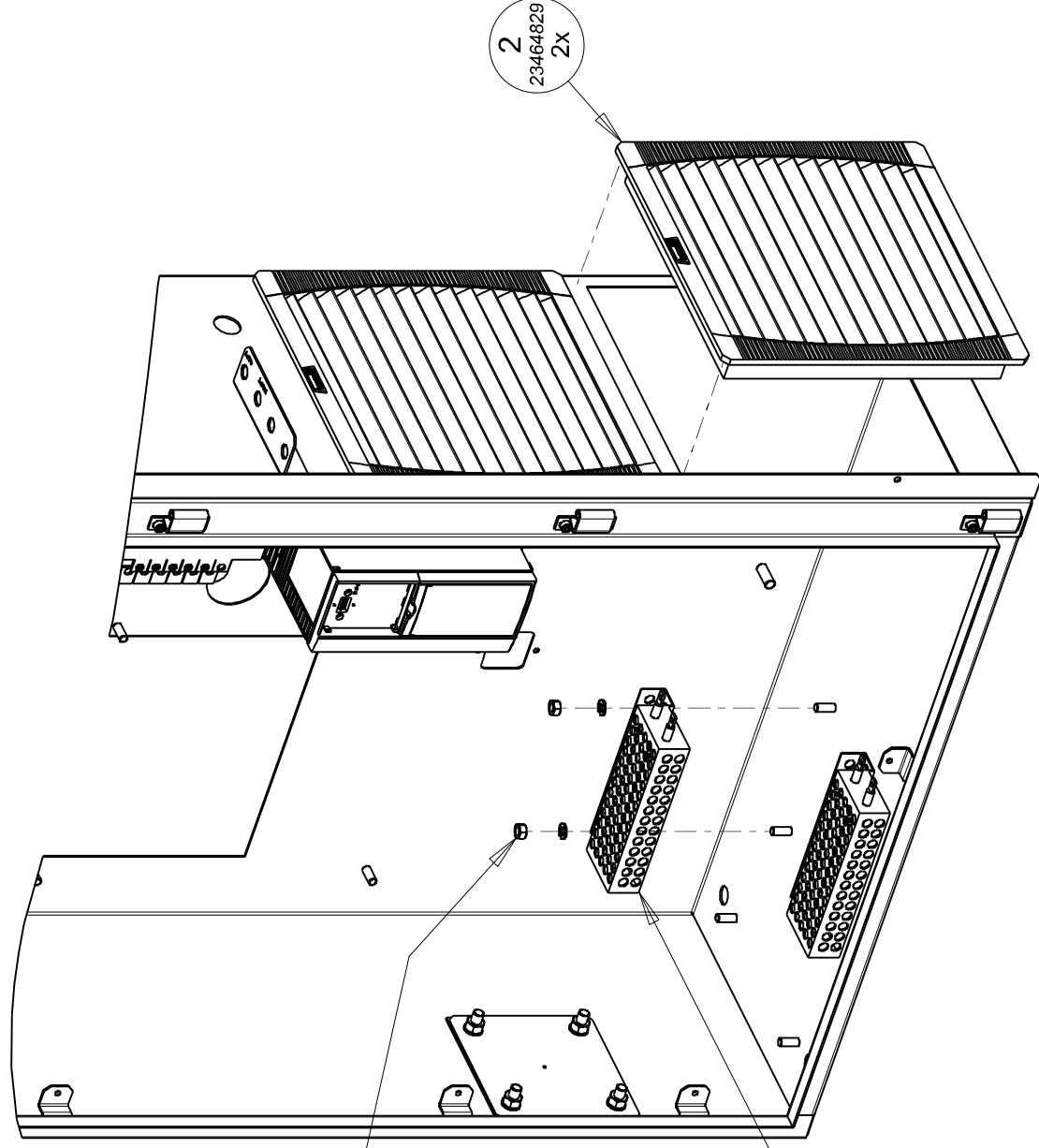
Title :

**STARTER BOX, 110KW
(VSD)**

REV
C

Item	Part No.	Description	Qty.
1	22245450	HEATER, 62.5 WATTS	2
2	23464829	FILTER, DRIVE BOX INTAKE (PFA 60,000)	2
3	96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25	4
4	96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8	4

Description
ASSEMBLE DRIVE BOX INTAKE FILTER AND HEATER



4
96741467
4X

3
96701370
4X

1
22245450
2X

2
23464829
2X



Part Number : 23475502

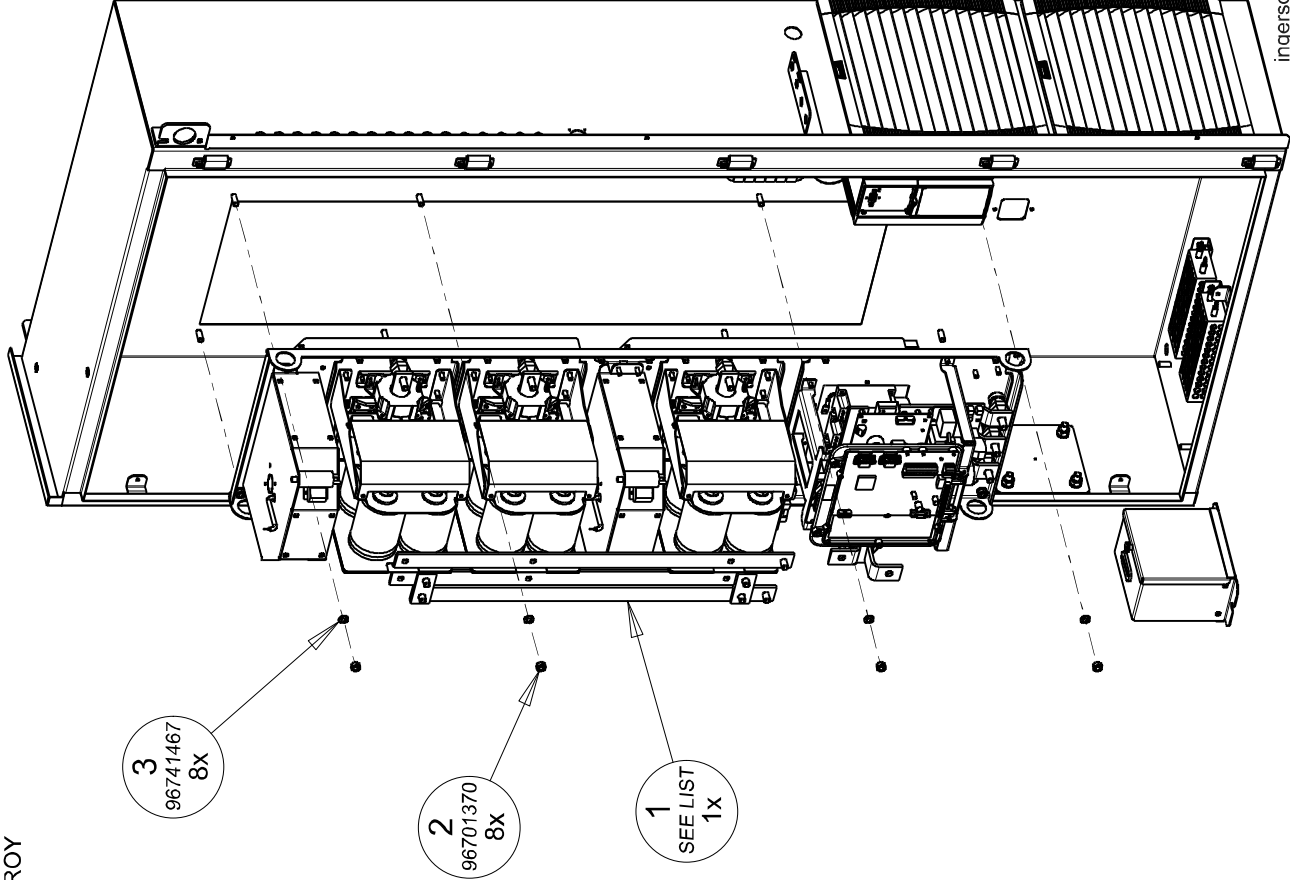
120

REV C
**STARTER BOX, 110KW
 (VSD)**

Title :

Description
 ASSEMBLE DRIVE LEROY

Item	Part No.	Description	Qty.
1	SEE LIST	DRIVE, HPM	1
2	96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25	8
3	96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8	8



ALTERNATE HPM DRIVE LIST

Item	Part No.	Description	Qty.
1	23582216	DRIVE, HPM, 110KW 380-480VAC	1
1	23582224	DRIVE, HPM, 90KW 380-480VAC	1



Part Number : **23475502**

121

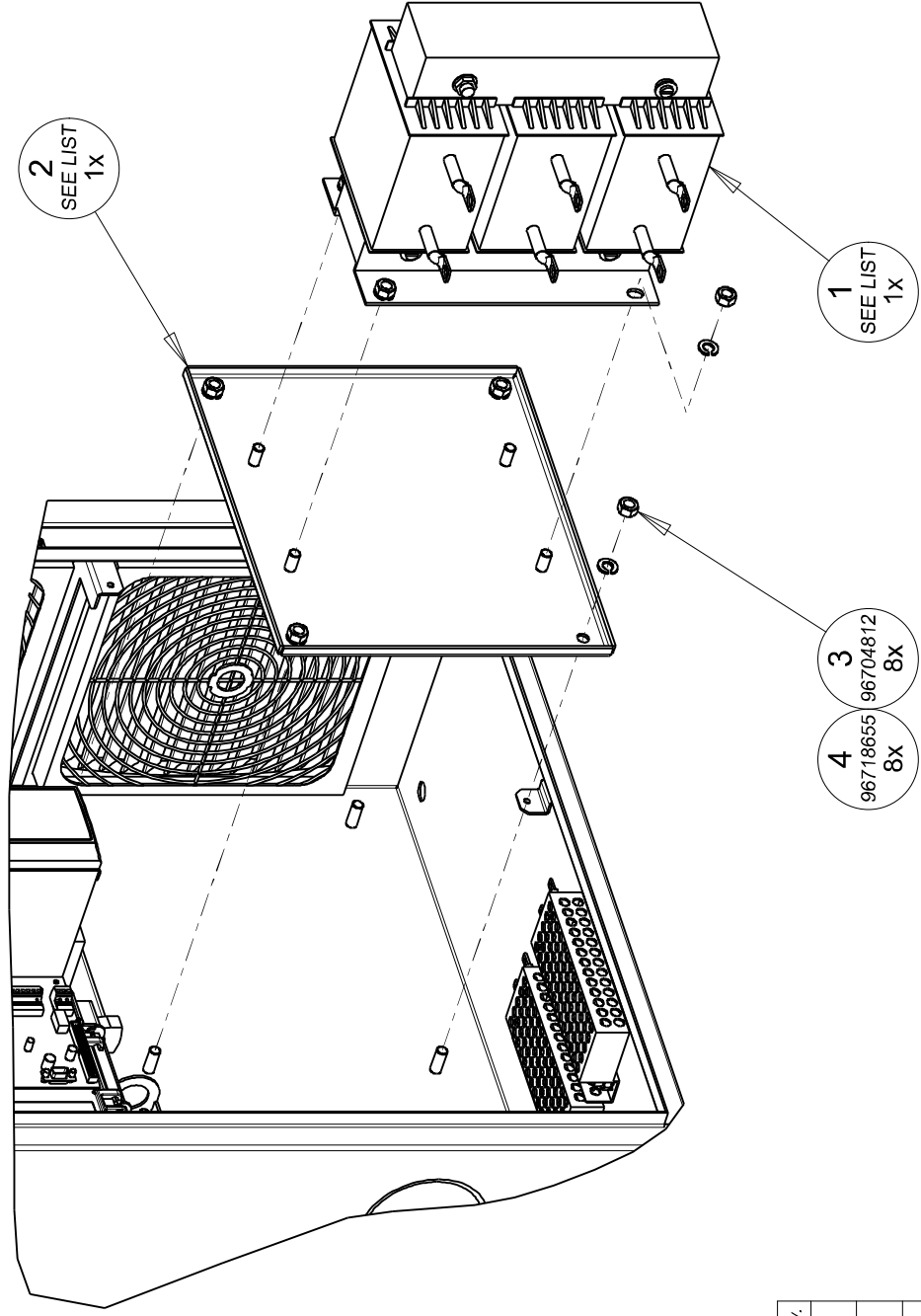
Title :

**STARTER BOX, 110KW
(VSD)**

REV **C**

Description
ASSEMBLE LINE REACTOR

Item	Part No.	Description	Qty.
1	SEE LIST	REACTOR, LINE	1
2	SEE LIST	PLATE, LINE REACTOR MOUNTING	1
3	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	8
4	96718655	WASHER, SPRING LOCK, CURVED TYPE A, M10	8



**ALTERNATE
LINE REACTOR & PLATE LIST**

Item	Part No.	Description	Qty.
1	23428592	REACTOR, LINE (KLR 250 CCB)	1
1	23536204	REACTOR, LINE (RWK 212-230-KS)	1
2	23474380	PLATE, LINE REACTOR MOUNTING	1
2	23536212	PLATE, LINE REACTOR MOUNTING	1



Part Number : **23475502**

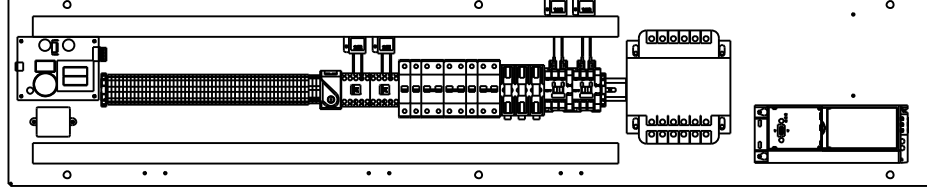
Title : **STARTER BOX, 110KW
(VSD)**

REV **C**

122

Description
LIST, BACK PANEL ASSEMBLIES

Item	Part No.	Description	Qty.



ALTERNATE BACK PANEL LIST

Item	Part No.	Description	Qty.
1	23466584	ASSEMBLY, BACKPANEL (90-110kW AIR CLD VSD / 380-575V 60 Hz)	1
1	23466592	ASSEMBLY, BACKPANEL (90-110kW AIR CLD VSD / 400V 50 Hz)	1
1	23466618	ASSEMBLY, BACKPANEL (90-110kW WTR CLD VSD / 380-575V 60 Hz)	1
1	23466626	ASSEMBLY, BACKPANEL (90-110kW WTR CLD VSD - 400V 50 Hz)	1



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Part Number :

23475502

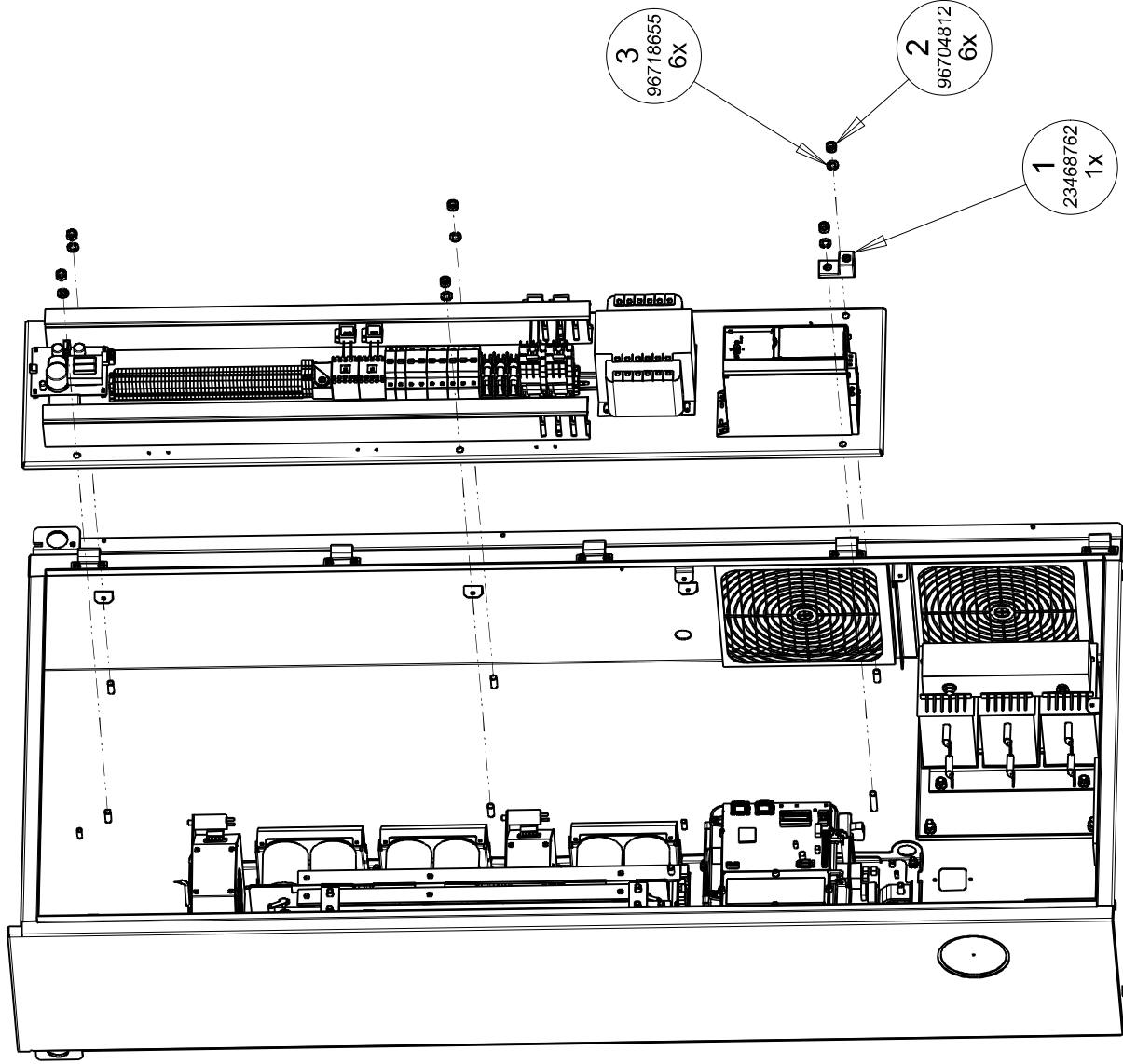
Title :

**STARTER BOX, 110KW
(VSD)**

REV
C

Item	Part No.	Description	Qty.
1	23468762	LUG, GROUND	1
2	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	6
3	96718655	WASHER, SPRING LOCK, CURVED TYPE A, M10	6

Description
ASSEMBLE BACK PANEL TO STARTER BOX





Part Number : **23475502**

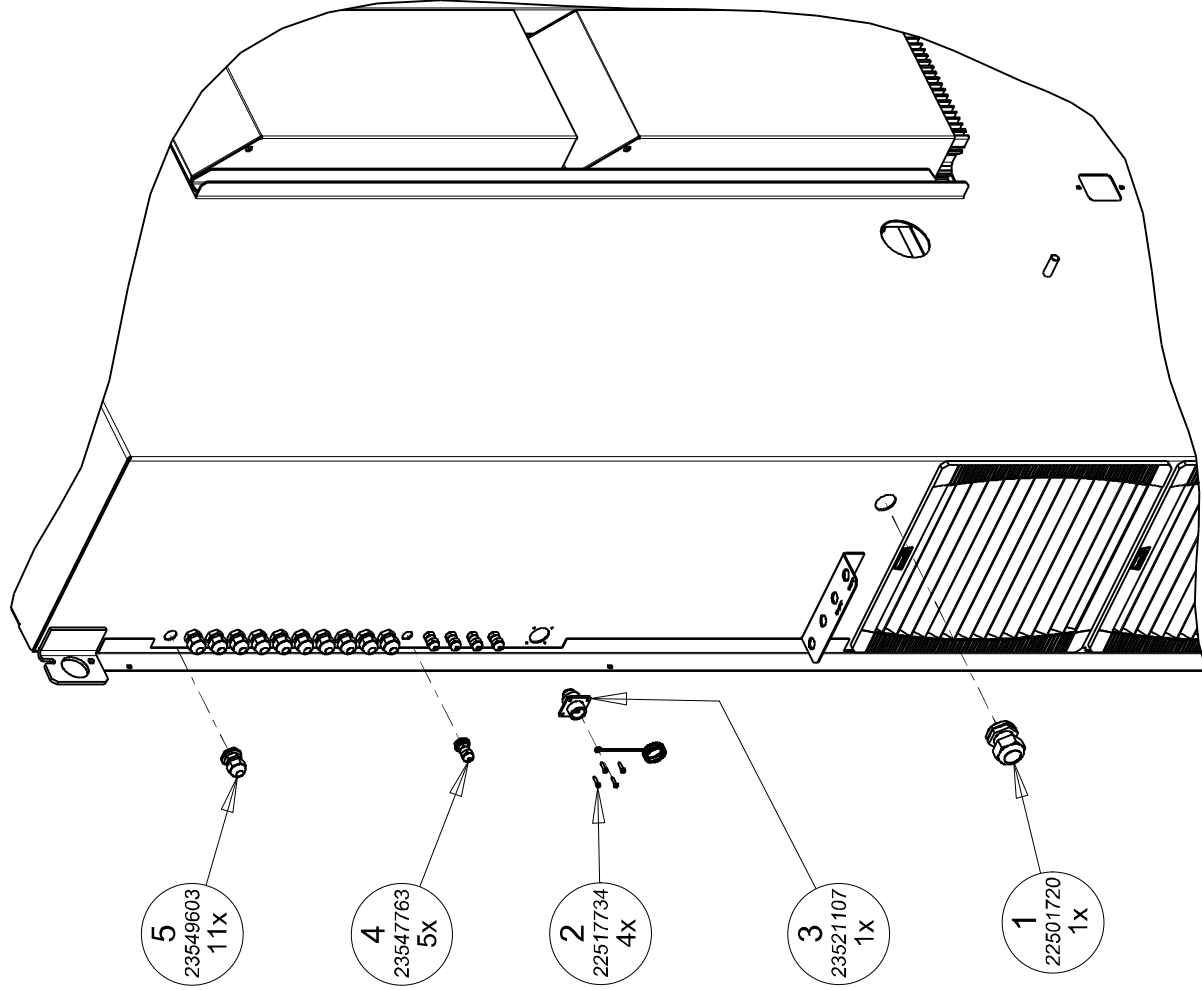
124

REV C

Title : **STARTER BOX, 110KW (VSD)**

Item	Part No.	Description	Qty.
1	22501720	GLAND, CABLE M25X1.5	1
2	22517734	SCREW, M3 X .5 X 12 PHILLIPS PAN HEAD THREAD FORMING	4
3	23521107	CABLE, COMMUNICATION SERVICE TOOL	1
4	23547763	GLAND, WIRE WITH LOCKING NUT	5
5	23549603	GLAND, WIRE WITH LOCKING NUT	11

Description
ASSEMBLE GLAND WIRE AND CABLE SERVICE COMM



NOTE: TORQUE FOR WIRE GLANDS IS 2.5NM



Part Number : **23475502**

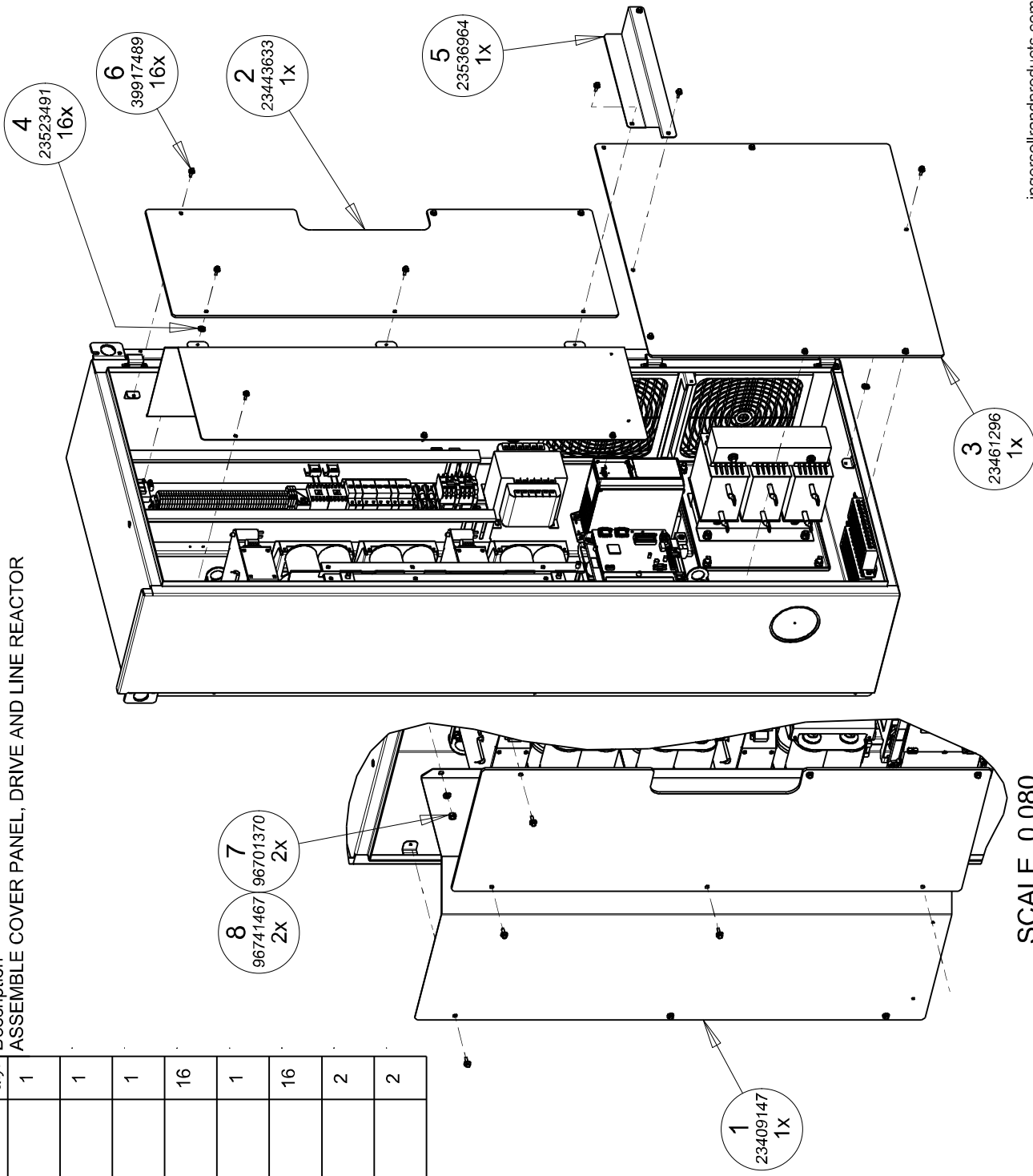
125

Title : **STARTER BOX, 110KW (VSD)**

REV **C**

Item	Part No.	Description	Qty.
1	23409147	PANEL, DRIVE	1
2	23443633	PANEL, CLEAR STARTER BOX	1
3	23461296	COVER, LINE REACTOR	1
4	23523491	RETAINER, 6mm SCREW	16
5	23536964	COVER, ANGLED	1
6	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	16
7	96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25	2
8	96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8	2

Description
ASSEMBLE COVER PANEL, DRIVE AND LINE REACTOR



SCALE 0.080



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Industrial Technologies

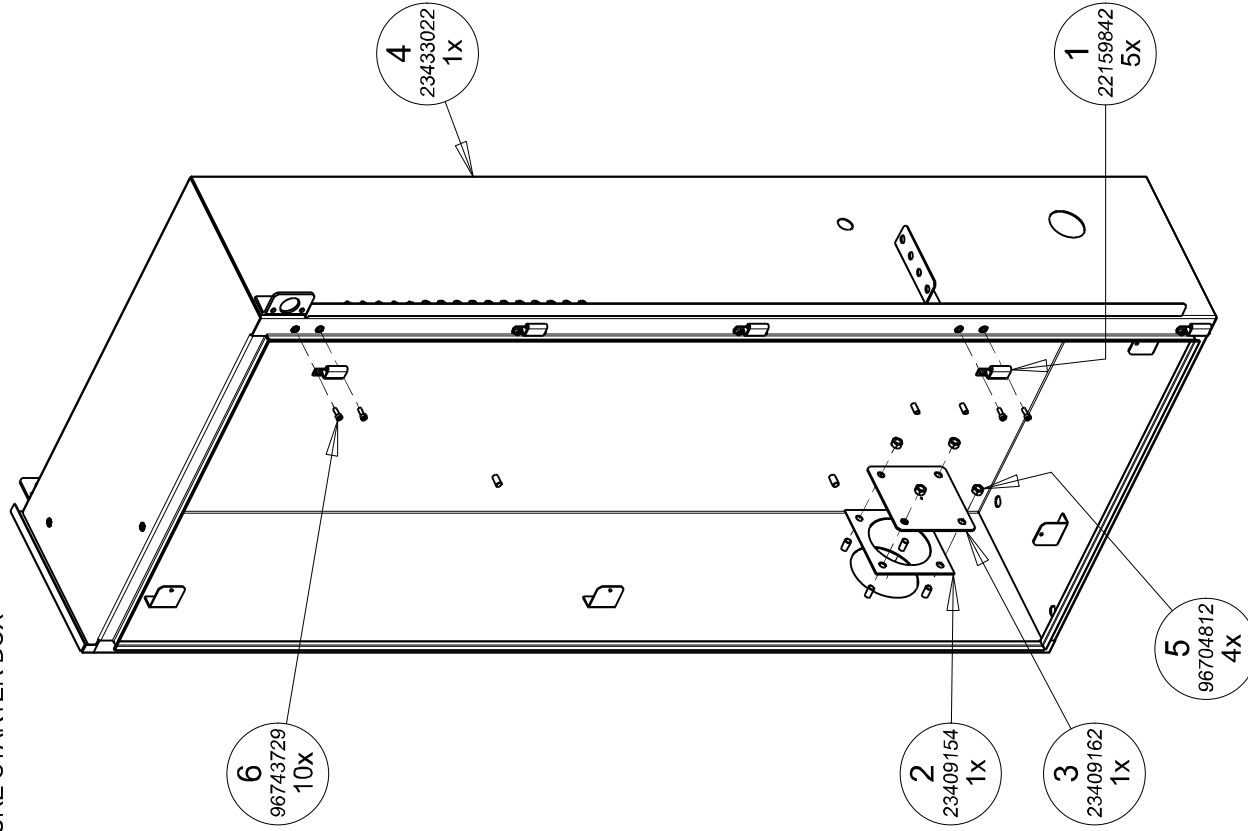
Part Number : **23477540**

127

REV **A**
Title : **ASSY, STARTER BOX 90-110KW 400V
50 HZ, (AIR COOLED - Y/D)**

Item	Part No.	Description	Qty.
1	22159842	HINGE, PIN HALF	5
2	23409154	GASKET, POWER-IN PLATE STARTER BOX	1
3	23409162	PLATE, STARTER BOX POWER	1
4	23433022	ENCLOSURE, STARTER BOX FIXED SPEED	1
5	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	4
6	96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG	10

Description
ASSEMBLE FIXED SPEED ENCLOSURE STARTER BOX





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Industrial Technologies

128

Part Number : **23477540**

Title :

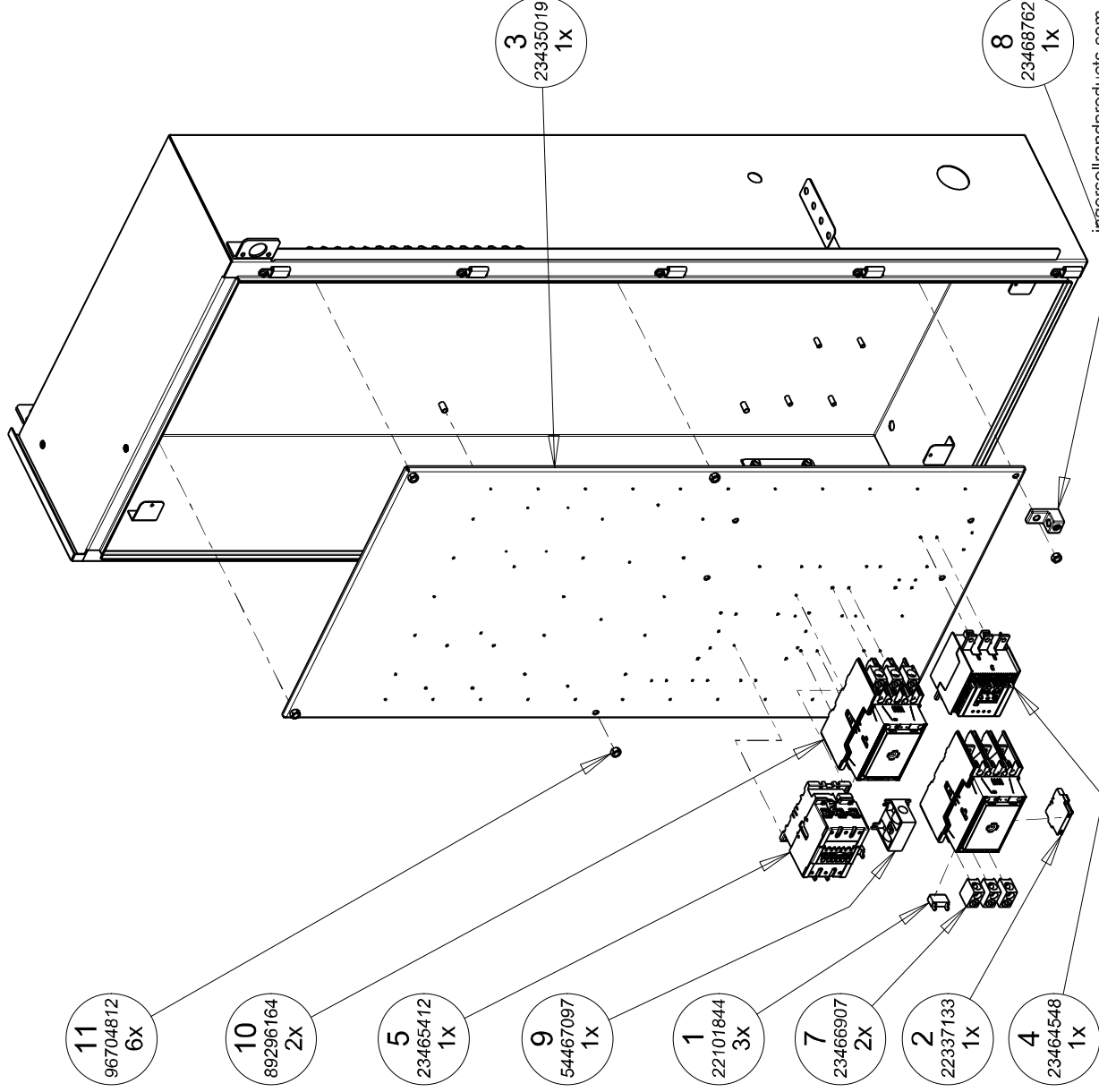
**ASSY, STARTER BOX 90-110KW 400V
50 HZ, (AIR COOLED - Y/D)**

REV **A**

Item	Part No.	Description	Qty.
1	22101844	SUPPRESSOR, SURGE RC A50 TO A320	3
2	22337133	CONTACT, AUXILIARY NO/NC	1
3	23435019	PANEL, BACK (FIXED SPEED)	1
4	23464548	RELAY, OVERLOAD	1
5	23465412	CONTACTOR, 110A	1
6	23466899	KIT, CONNECTION ABB YD STARTERS	1
7	23466907	SET, LUG	2
8	23468762	LUG, GROUND	1
9	54467097	INTERLOCK, MECHANICAL	1
10	89296164	CONTACTOR, 145A	2
11	96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50	6

Description

ASSEMBLE BACK PANEL, CONTACTOR, RELAY, SUPPRESSOR, LUG AND CONNECTION KIT





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Industrial Technologies

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Part Number : **23477540**

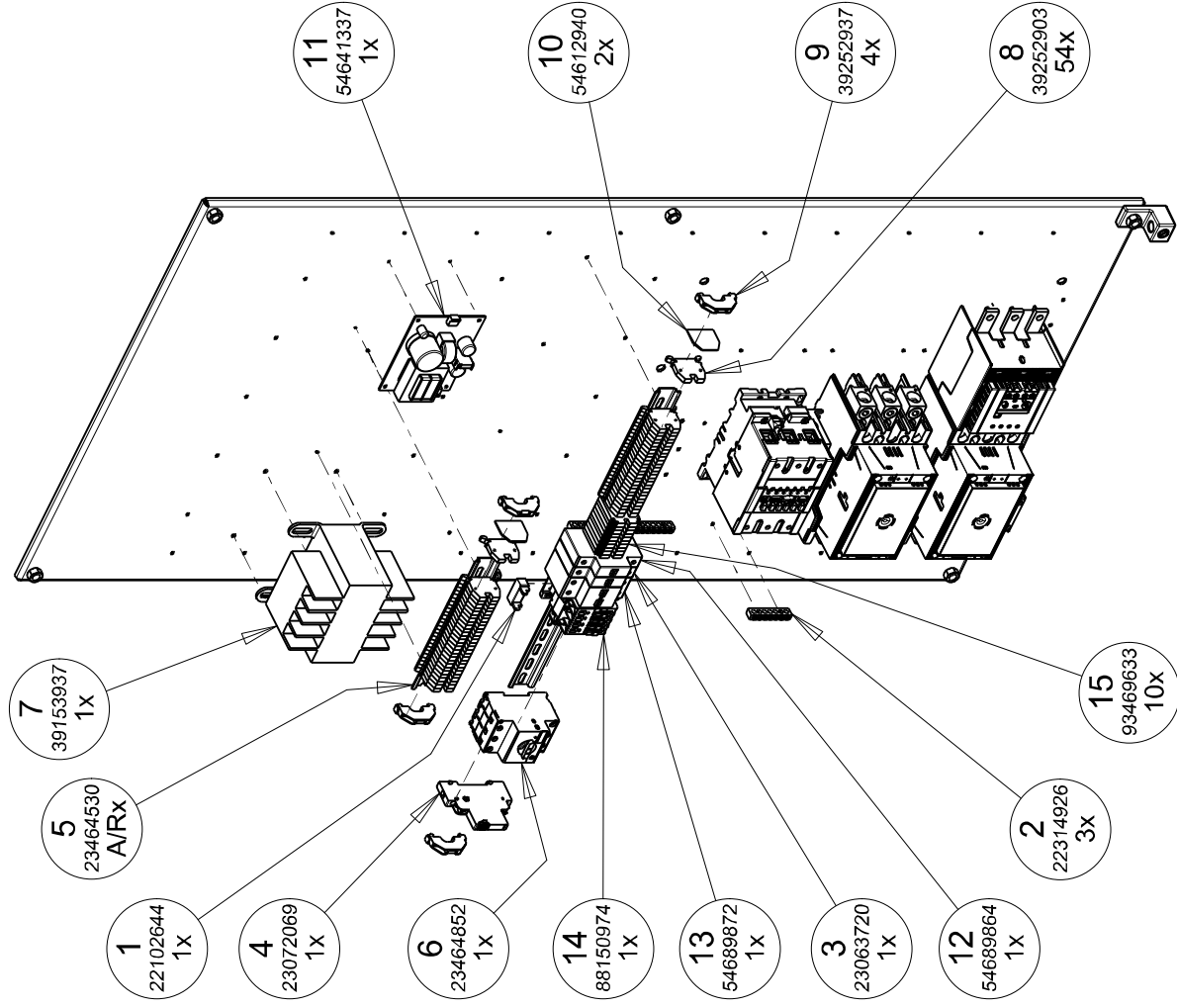
Title :

**ASSY, STARTER BOX 90-110KW 400V
50 HZ, (AIR COOLED - Y/D)**

REV **A**

Item	Part No.	Description	Qty.
1	22102644	SUPPRESSOR, SURGE RC A45 TO A300	1
2	22314926	BUS, GROUND	3
3	23063720	BREAKER, CIRCUIT 6A - 1P	1
4	23072069	BLOCK, AUX CONTACT 1NO / 1NC	1
5	23464530	RAIL, 35 MM DIN	A/R
6	23464852	FAN MOTOR PROTECTOR MS325-9.0	1
7	39153937	CONTROL TRANSOFRMER, 500 VA	1
8	39252903	BLOCK, TERMINAL	54
9	39252937	STOP, DIN RAIL N37-75	4
10	54612940	TERMINAL, END PLATE GREY TERMINAL, END PLATE GREY	2
11	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY	1
12	54689864	BREAKER, CIRCUIT	1
13	54689872	BREAKER, CIRCUIT	1
14	88150974	CONTACTOR, 17A A16-30-01 110V	1
15	93469633	TERMINAL, EARTH M4/6.P	10

Description
ASSEMBLE TRANSFORMER, CONTACTOR, CIRCUIT BREAKER AND TERMINAL BLOCKS





Ingersoll Rand
Industrial Technologies

130

Part Number :

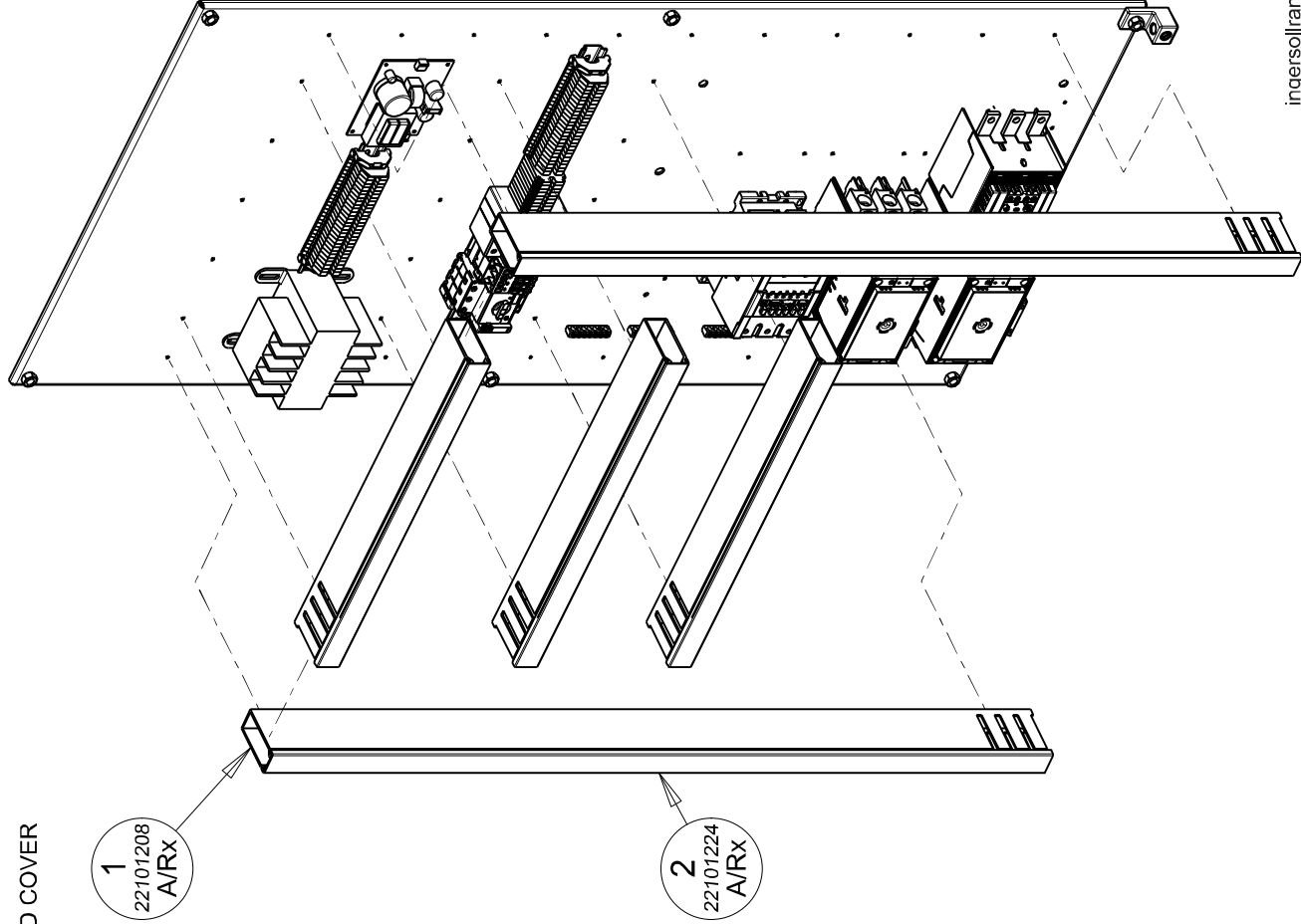
23477540

Title :

**ASSY, STARTER BOX 90-110KW 400V
50 HZ, (AIR COOLED - Y/D)**

REV
A

Item	Part No.	Description	Qty.	Description
1	22101208	DUCT, WIRING, 1" X 3"	A/R	ASSEMBLE DUCT AND COVER
2	22101224	COVER, WIRING DUCT, 1"	A/R	





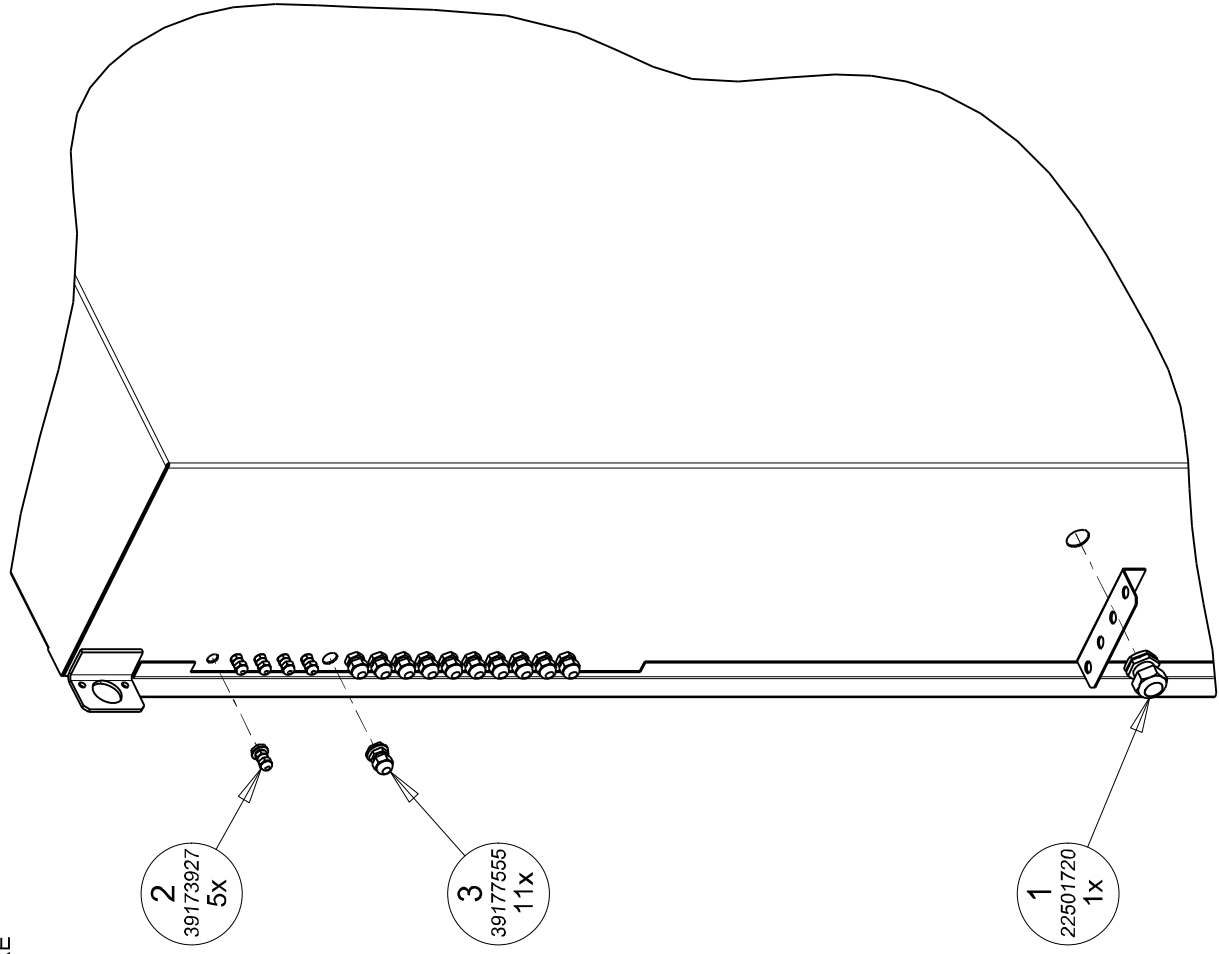
Part Number : **23477540**

131

REV **A**
**ASSY, STARTER BOX 90-110KW 400V
 50 HZ, (AIR COOLED - Y/D)**

Description
 ASSEMBLE GLAND WIRE

Item	Part No.	Description	Qty.
1	22501720	GLAND, CABLE M25X1.5	1
2	39173927	GLAND, WIRE WITH LOCKING NUT .118-.255	5
3	39177555	GLAND, WIRE	11





Ingersoll Rand
Industrial Technologies

Part Number :

23477540

132

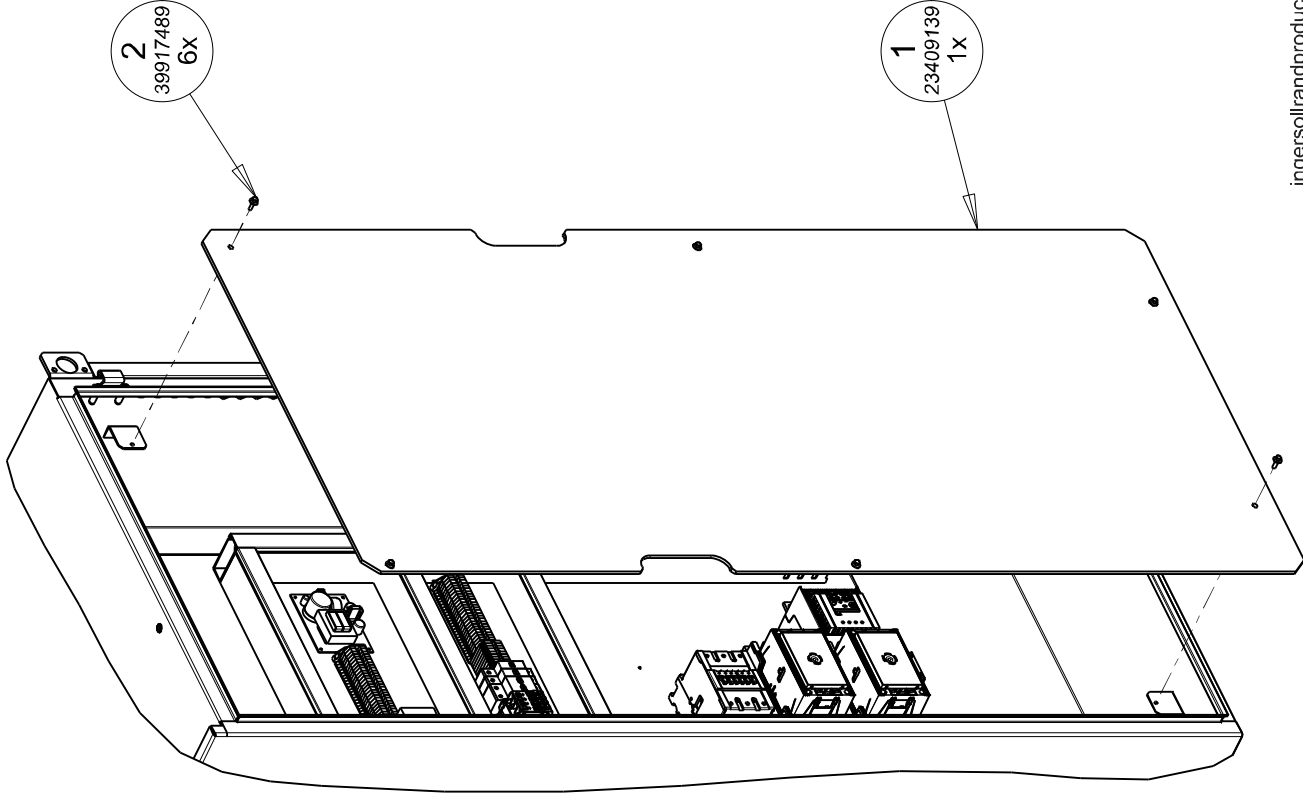
Title :

**ASSY, STARTER BOX 90-110KW 400V
50 HZ, (AIR COOLED - Y/D)**

REV
A

Description
ASSEMBLE CLEAR PANEL

Item	Part No.	Description	Qty.
1	23409139	PANEL, CLEAR STARTER BOX	1
2	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	6





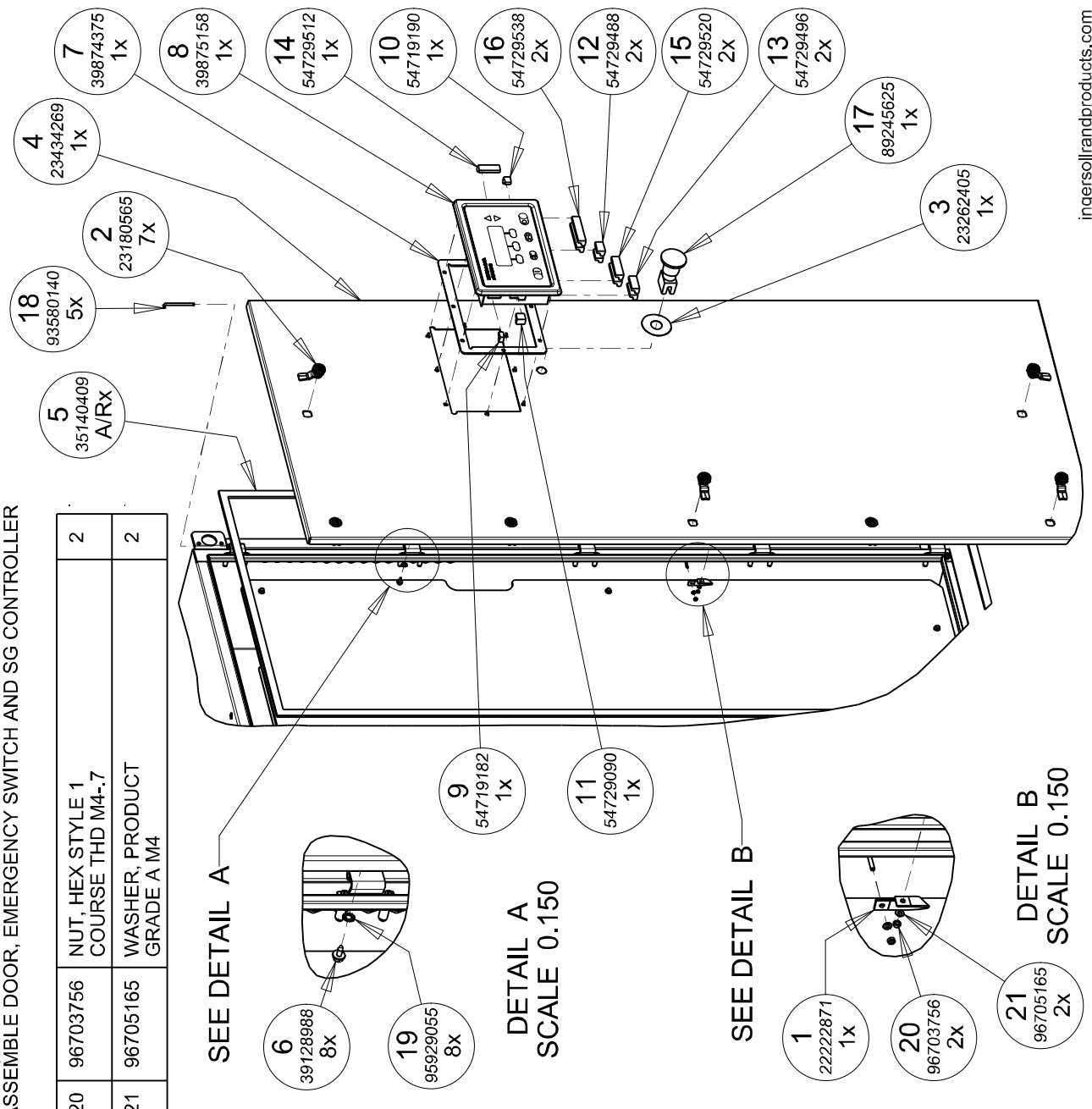
133

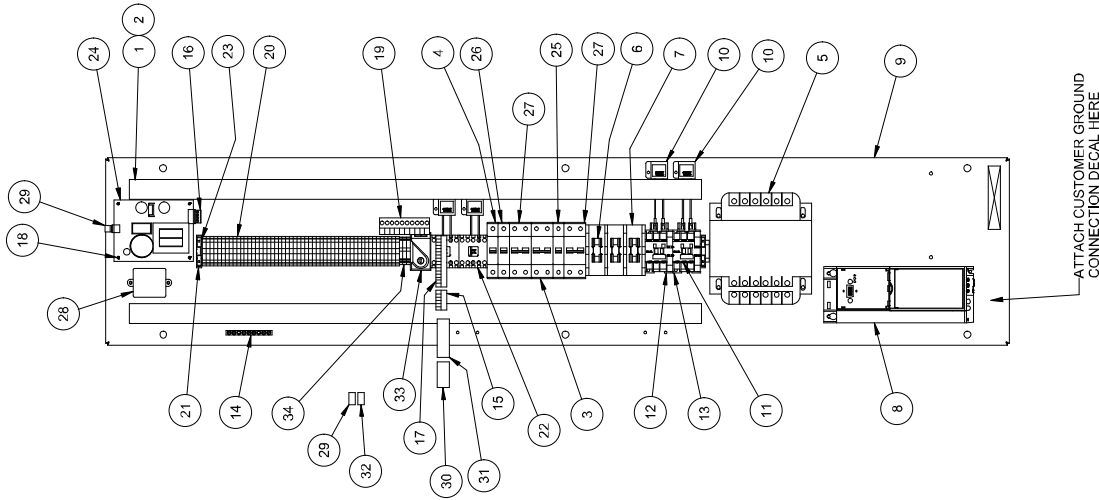
Part Number : **23477540**

REV **A**
**ASSY, STARTER BOX 90-110KW 400V
 50 HZ, (AIR COOLED - Y/D)**

Item	Part No.	Description	Qty.
1	22222871	STRAP, GROUND 150mm LONG	1
2	23180565	LATCH, DOOR (NEMA 4) 28mm HEAD / 24mm OFFSET	7
3	23262405	PLATE, EMERGENCY STOP SWITCH	1
4	23434269	DOOR, STARTER BOX	1
5	35140409	STRIP, RUBBER SEAL (.25 INCH THICK X .75 INCHES WIDE)	A/R
6	39128988	SCREW, SELF THREADING .25 X .50 LONG ZINC PLATED	8
7	39874375	GASKET, INTELLISYS - SG	1
8	39875158	ASSEMBLY, CONTROLLER INTELLISYS-SG	1
9	54719182	CONNECTOR, 2 WAY	1
10	54719190	CONNECTOR, 3 WAY	1
11	54729090	CONNECTOR, 4 WAY	1
12	54729488	CONNECTOR, 6 WAY	2
13	54729496	CONNECTOR, 8 WAY	2
14	54729512	CONNECTOR, 10 WAY	1
15	54729520	CONNECTOR, 12 WAY	2
16	54729538	CONNECTOR, 16 WAY	2
17	89245625	SWITCH, EMERGENCY STOP (LATCHING 2N/C)	1
18	93580140	HINGE, PIN	5
19	95929055	WASHER, LOCK EXTERNAL TOOTH FLAT TYPE A, .25	8

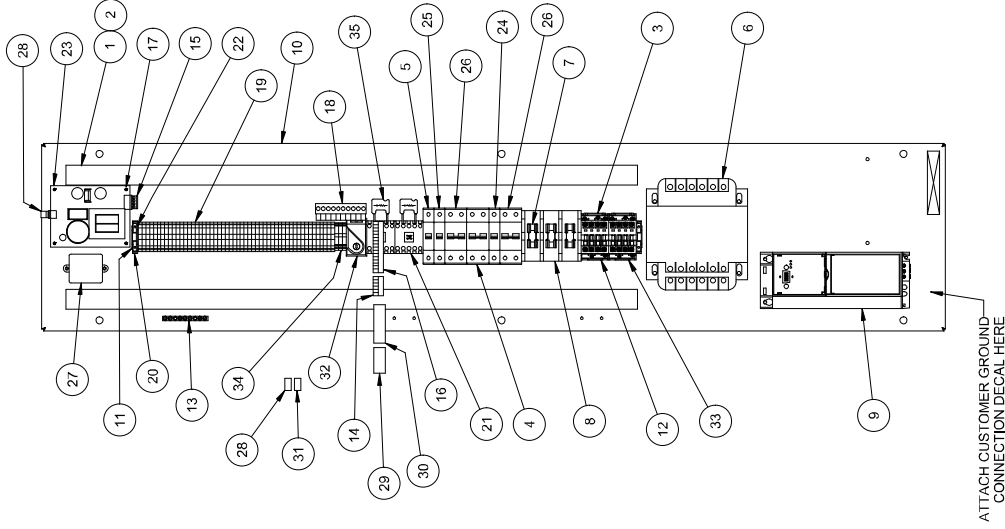
Description	Qty.
ASSEMBLY DOOR, EMERGENCY SWITCH AND SG CONTROLLER	1
20 96703756 NUT, HEX STYLE 1 COURSE THD M4-.7	2
21 96705165 WASHER, PRODUCT GRADE A M4	2





34	3	93469633	TERMINAL, EARTH M4/6.P		
33	1	54766928	THERMOSTAT, NORMALLY CLOSED		
32	1	54729546	CONNECTOR, 2 WAY		
31	2	54729520	CONNECTOR, 12 WAY		
30	2	54729498	CONNECTOR, 8 WAY		
29	2	54719182	CONNECTOR, 2 WAY		
28	1	54719174	FILTER, RFI POWER LINE		
27	2	54689872	BREAKER, CIRCUIT -		
26	1	54689884	BREAKER, CIRCUIT		
25	1	54689856	BREAKER, CIRCUIT		
24	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY		
23	1	54612940	TERMINAL, END PLATE GREY		
22	2	39266200	RELAY, K1-2 N37 KW - 300 HP		
21	2	39252937	STOP, DIN RAIL N37-75		
20	52	39252903	BLOCK, TERMINAL		
19	1	39242375	PLUG, 10 POSITION		
18	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM		
17	2	39191655	PLUG, 16 POSITION		
16	1	39186101	PLUG, 4 POSITION		
15	2	39186093	PLUG, 6 POSITION		
14	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
13	1	23505647	CONTACTOR, 22 AMPS		
12	1	23467194	CONTACTOR, BLOWER MOTOR KM4, RSC-12-6AC110		
11	A/R	23464530	RAIL, 35 MM DIN		
10	4	23465620	SUPPRESSOR, SURGE		
9	1	23436694	PANEL, BACK (VSD)		
8	1	23434368	DRIVE, FAN VF (FC51M3)4KW		
7	1	22315675	BLOCK, FUSE 30A, 600V, 3-POLE		
6	3	22315618	FUSE, 20A 600V		
5	1	22242390	TRANSFORMER, CONTROL 850VA MULTITAP 380-480V		
4	1	22135818	BREAKER, CIRCUIT 6A - 1P		
3	1	22135800	BREAKER, CIRCUIT 1A - 2P MCB3		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		
ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHTIZ
BOM FOR 23466584					

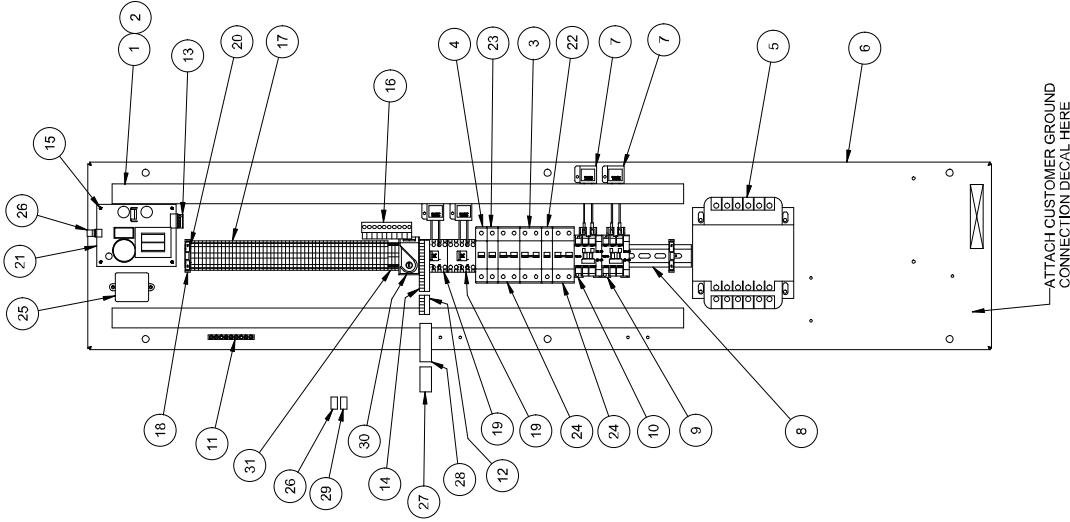
ASSEMBLY, BACKPANEL
 (90-110kW AIR CLD VSD / 380-575V 60 Hz)
 23466584 D



ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHT/Z
35	2	22085864	SUPPRESSOR, ARC		
34	3	93468633	TERMINAL, EARTH M4x6,P		
33	1	88150974	CONTACTOR, 17A A16-3C-01.110V		
32	1	54768928	THERMOSTAT, NORMALLY CLOSED		
31	1	54729546	CONNECTOR, 2 WAY		
30	2	54729520	CONNECTOR, 12 WAY		
29	2	54729496	CONNECTOR, 8 WAY		
28	2	54719182	CONNECTOR, 2 WAY		
27	1	54719174	FILTER, RFI POWER LINE		
26	2	54688872	BREAKER, CIRCUIT -		
25	1	54688864	BREAKER, CIRCUIT		
24	1	54688856	BREAKER, CIRCUIT		
23	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY		
22	1	54612940	TERMINAL, END PLATE GREY		
21	2	39266200	RELAY, K1-2 N37 KW - 300 HP		
20	2	39252937	STOP, DIN RAIL N37-75		
19	52	39252903	BLOCK, TERMINAL		
18	1	39242375	PLUG, 10 POSITION		
17	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM		
16	2	39191655	PLUG, 16 POSITION		
15	1	39186101	PLUG, 4 POSITION		
14	2	39186093	PLUG, 6 POSITION		
13	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
12	1	23518459	CONTACTOR, 17A A16-3C-10		
11	A/R	23464530	RAIL, 35 MM DIN		
10	1	23436694	PANEL, BACK (VSD)		
9	1	23434368	DRIVE, FAN VF (FC51M3)-4KW		
8	1	22315675	BLOCK, FUSE 30A, 600V, 3-POLE		
7	3	22315618	FUSE, 20A 600V		
6	1	22242390	TRANSFORMER, CONTROL 850VA MULTI-TAP 380-480V		
5	1	22135818	BREAKER, CIRCUIT 6A - 1P		
4	1	22135800	BREAKER, CIRCUIT 1A - 2P MCB3		
3	2	22102644	SUPPRESSOR, SURGE RC A45 TO A300		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		

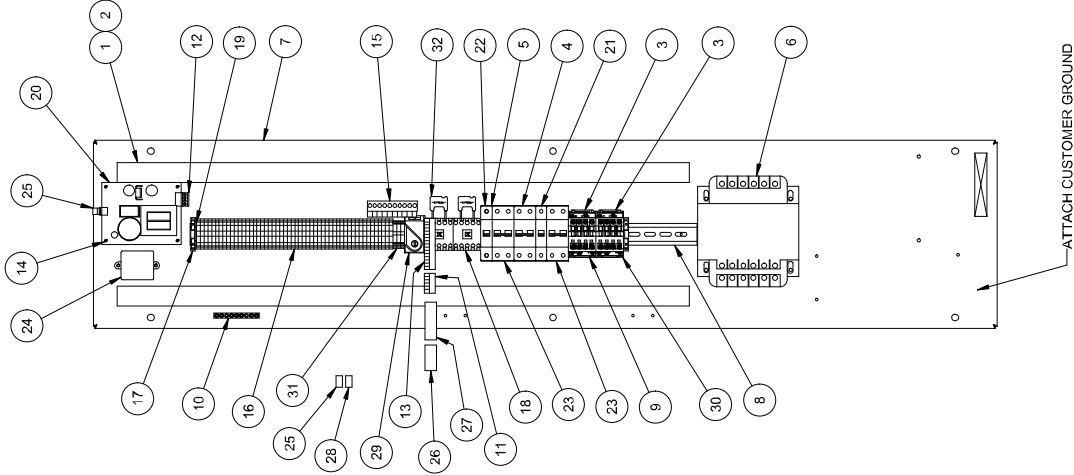
BOM FOR 23466592

ASSEMBLY, BACKPANEL
(90-110kW AIR CLD VSD / 400V 50 Hz)
23466592 D



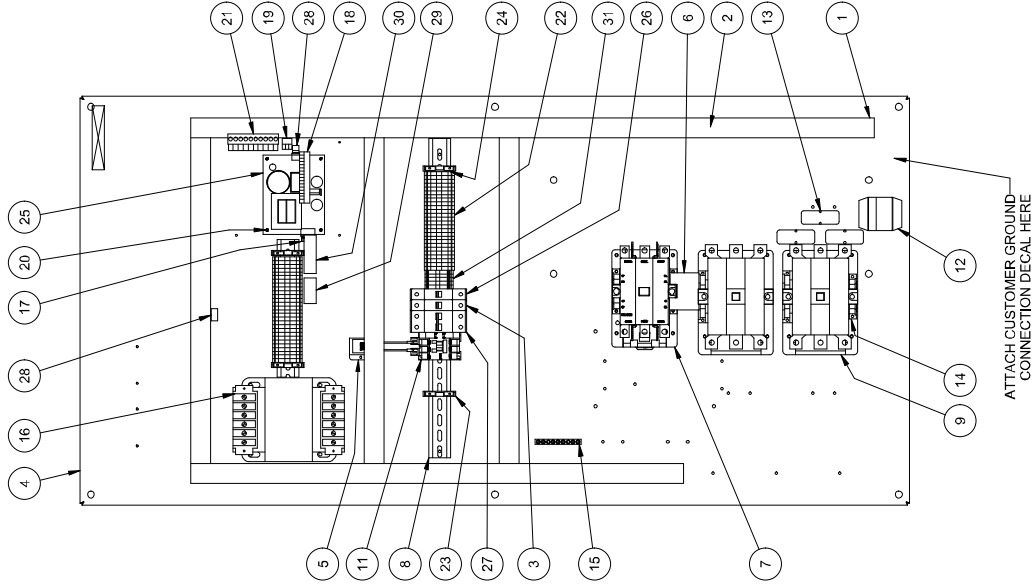
ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHT/Z	
31	3	93469633	TERMINAL, EARTH M4/6,P			
30	1	54766928	THERMOSTAT, NORMALLY CLOSED			
29	1	54729546	CONNECTOR, 2 WAY			
28	2	54729520	CONNECTOR, 12 WAY			
27	2	54729496	CONNECTOR, 8 WAY			
26	2	54719182	CONNECTOR, 2 WAY			
25	1	54719174	FILTER, RFI POWER LINE			
24	2	54689872	BREAKER, CIRCUIT -			
23	1	54689864	BREAKER, CIRCUIT			
22	1	54689856	BREAKER, CIRCUIT			
21	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY			
20	1	54612940	TERMINAL, END PLATE GREY			
19	2	39266200	RELAY, K1-2 N37 KW - 300 HP			
18	2	39252937	STOP, DIN RAIL, N37-75			
17	52	39252903	BLOCK, TERMINAL			
16	1	39242375	PLUG, 10 POSITION			
15	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM			
14	2	39191655	PLUG, 16 POSITION			
13	1	39186101	PLUG, 4 POSITION			
12	2	39186093	PLUG, 6 POSITION			
11	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)			
10	1	23505647	CONTACTOR, 22 AMPS			
9	1	23467194	CONTACTOR, BLOWER MOTOR KM4, RSC-12-6AC110			
8	A/R	23464530	RAIL, 35 MM DIN			
7	4	23455520	SUPPRESSOR, SURGE			
6	1	23436694	PANEL, BACK (VSD)			
5	1	22424290	TRANSFORMER, CONTROL 850VA MULTI-TAP 380-480V			
4	1	22135818	BREAKER, CIRCUIT 6A - 1P			
3	1	22135800	BREAKER, CIRCUIT 1A - 2P MCB3			
2	A/R	22101224	COVER, WIRING DUCT, 1"			
1	A/R	22101208	DUCT, WIRING, 1" X 3"			
DESCRIPTION					MATL.	SHT/Z
BOM FOR 23466618						

ASSEMBLY, BACKPANEL
 (90-110kW WTR CLD VSD / 380-575V 60 Hz)
 23466618 D



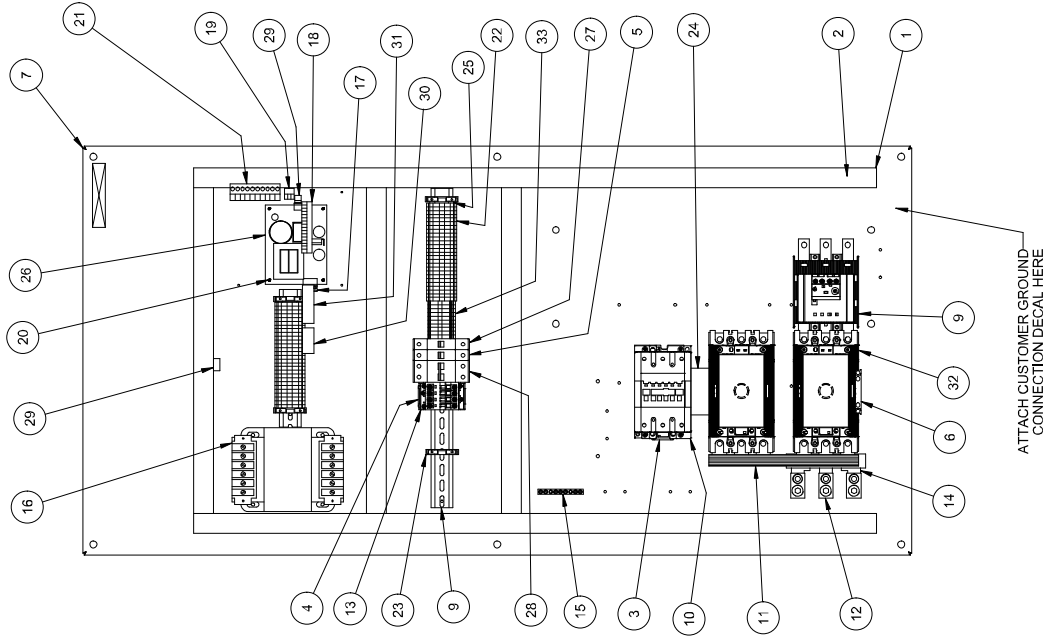
ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHTZ
32	2	22085864	SUPPRESSOR, ARC		
31	3	93469633	TERMINAL, EARTH M1/6.P		
30	1	88150974	CONTACTOR, 17A A16-30-01 110V		
29	1	54766928	THERMOSTAT, NORMALLY CLOSED		
28	1	54729546	CONNECTOR, 2 WAY		
27	2	54729520	CONNECTOR, 12 WAY		
26	2	54729496	CONNECTOR, 8 WAY		
25	2	54719182	CONNECTOR, 2 WAY		
24	1	54719174	FILTER, RFI POWER LINE		
23	2	54689872	BREAKER, CIRCUIT -		
22	1	54689864	BREAKER, CIRCUIT		
21	1	54689856	BREAKER, CIRCUIT		
20	1	54641337	ASSEMBLY, PCB SGN- POWER SUPPLY		
19	1	54612940	TERMINAL, END PLATE GREY		
18	2	39266200	RELAY, K1-2 N37 KW - 300 HP		
17	2	39252937	STOP, DIN RAIL N37-75		
16	52	39252903	BLOCK, TERMINAL		
15	1	39242375	PLUG, 10 POSITION		
14	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM		
13	2	39191655	PLUG, 16 POSITION		
12	1	39186101	PLUG, 4 POSITION		
11	2	39186093	PLUG, 6 POSITION		
10	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
9	1	23518459	CONTACTOR, 17A A16-30-10		
8	A/R	23464530	RAIL, 35 MM DIN		
7	1	23136694	PANEL, BACK (VSD)		
6	1	22242390	TRANSFORMER, CONTROL 850VA MULTITAP 380-480V		
5	1	22138818	BREAKER, CIRCUIT 6A - 1P		
4	1	22135800	BREAKER, CIRCUIT 1A - 2P MCB3		
3	2	22102644	SUPPRESSOR, SURGE RC A45 TO A300		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		
			DESCRIPTION	MATL.	SHTZ
BOM FOR 23466626					

ASSEMBLY, BACKPANEL
(90-110kW WTR CLD VSD - 400V 50 Hz)
23466626 D



31	5	93469633	TERMINAL, EARTH IM4/6,P	
30	2	54729520	CONNECTOR, 12 WAY	
29	1	54729496	CONNECTOR, 8 WAY	
28	2	54719182	CONNECTOR, 2 WAY	
27	1	54669872	BREAKER, CIRCUIT -	
26	1	54669864	BREAKER, CIRCUIT	
25	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY	
24	2	54612940	TERMINAL, END PLATE GREY	
23	4	39252937	STOP, DIN RAIL N37-75	
22	54	39252903	BLOCK, TERMINAL	
21	1	39242375	PLUG, 10 POSITION	
20	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM	
19	1	39204441	PLUG, 3 POSITION	
18	2	39191655	PLUG, 16 POSITION	
17	1	39186101	PLUG, 4 POSITION	
16	1	39153937	CONTROL TRANSFORMER 500 VA.	
15	1	32342115	BUS, ALUMINUM GROUNDING (7 TAPS)	
14	1	23560550	CONTACTOR RSC-A100	
13	3	23517824	TRANSFORMER, CURRENT 200:5	
12	1	23467202	RELAY, ELECTRONIC OVERLOAD	
11	1	23467194	CONTACTOR, BLOWER MOTOR KM4, RSC-12-6AC110	
10	1	23466681	BAR, BUS (NOT SHOWN)	
9	2	23466758	CONTACTOR, 150A	
8	A/R	23464530	RAIL, 35 MM DIN	
7	1	23455579	CONTACTOR, 100A	
6	1	23455546	INTERLOCK, MECHANICAL	
5	1	23455520	SUPPRESSOR, SURGE	
4	1	23435019	PANEL, BACK (FIXED SPEED)	
3	1	22135818	BREAKER, CIRCUIT 6A - 1P	
2	A/R	22101224	COVER, WIRING DUCT, 1"	
1	A/R	22101208	DUCT, WIRING, 1" X 3"	
ITEM	QTY.	PART NO.	DESCRIPTION	MATL.
BOM FOR 23466600				
				SHT/2

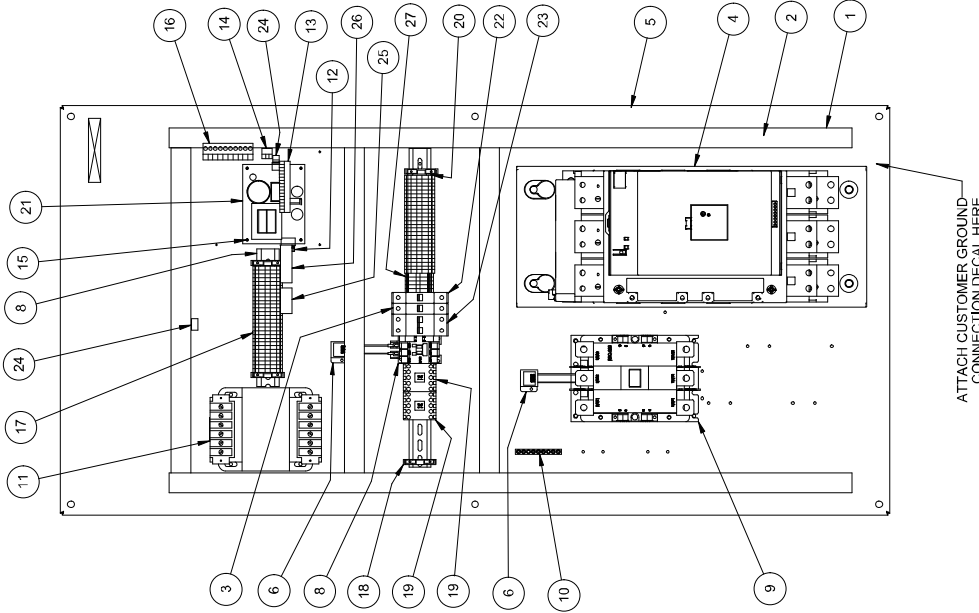
ASSEMBLY, BACKPANEL
(90-110kW / 380-575V 60 Hz)
23466600 E



ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHTZ
33	10	93469633	TERMINAL, EARTH M4/6.P		
32	2	89296164	CONTACTOR, 145A		
31	2	54729520	CONNECTOR, 12 WAY		
30	1	54729496	CONNECTOR, 8 WAY		
29	2	54719182	CONNECTOR, 2 WAY		
28	1	54689872	BREAKER, CIRCUIT-		
27	1	54689864	BREAKER, CIRCUIT		
26	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY		
25	2	54612940	TERMINAL, END PLATE GREY		
24	1	54467087	INTERLOCK, MECHANICAL		
23	4	39252937	STOP, DIN RAIL N37-75		
22	54	39252903	BLOCK, TERMINAL		
21	1	39242375	PLUG, 10 POSITION		
20	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM		
19	1	39204441	PLUG, 3 POSITION		
18	2	39191655	PLUG, 16 POSITION		
17	1	39186101	PLUG, 4 POSITION		
16	1	39159337	CONTROL TRANSFORMER 500 VA.		
15	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
14	1	23522691	EXTENSION, TERMINAL		
13	1	23519459	CONTACTOR, 17A A16-30-10		
12	1	23466907	SET, LUG		
11	1	23466899	KIT, CONNECTION ABB YD STARTERS		
10	1	23465412	CONTACTOR, 110A		
9	1	23464548	RELAY, OVERLOAD		
8	A/R	23464530	RAIL, 35 MM DIN		
7	1	23439019	PANEL, BACK (FIXED SPEED)		
6	1	22337133	CONTACT, AUXILIARY NO/NC		
5	1	22135818	BREAKER, CIRCUIT 6A - 1P		
4	1	22107644	SUPPRESSOR, SURGE RC A45 TO A300		
3	3	22101844	SUPPRESSOR, SURGE RC A50 TO A320		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		
BOM FOR 23465354					
ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHTZ

**ASSEMBLY, BACKPANEL
(90-110kW - 400V 50 Hz)**

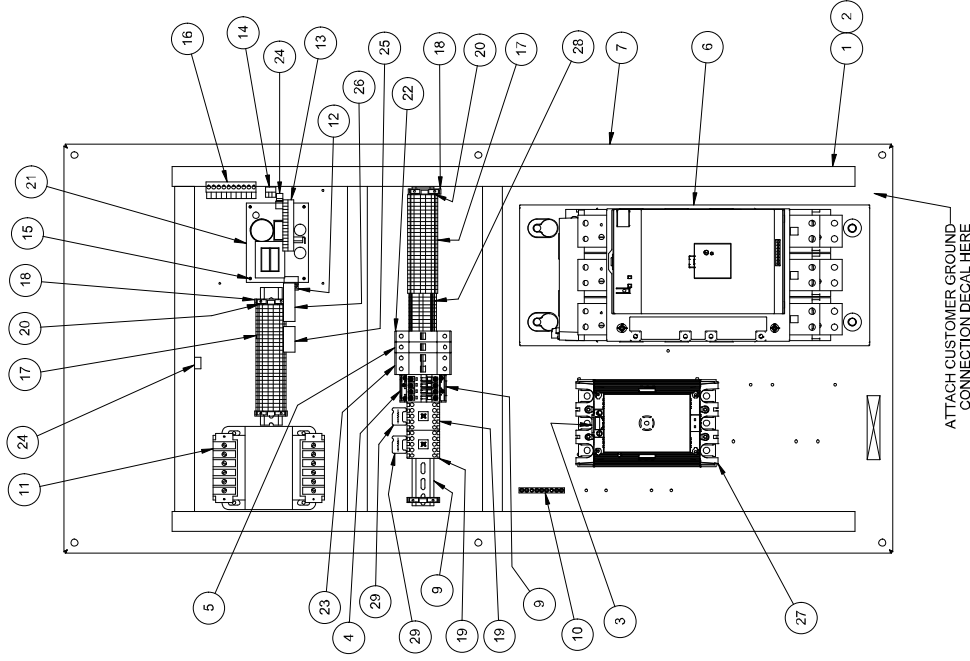
23465354 C



ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHT/Z
27	5	93469633	TERMINAL, EARTH M4/6,P		
26	2	54729520	CONNECTOR, 12 WAY		
25	1	54729496	CONNECTOR, 8 WAY		
24	2	54719182	CONNECTOR, 2 WAY		
23	1	54689872	BREAKER, CIRCUIT-		
22	1	54689864	BREAKER, CIRCUIT		
21	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY		
20	2	54612940	TERMINAL, END PLATE GREY		
19	2	39266200	RELAY, K1-2 N37 KW - 300 HP		
18	4	39252937	STOP, DIN RAIL N37-75		
17	54	39252903	BLOCK, TERMINAL		
16	1	39242375	PLUG, 10 POSITION		
15	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINUM		
14	1	39204441	PLUG, 3 POSITION		
13	2	39191655	PLUG, 16 POSITION		
12	1	39186101	PLUG, 4 POSITION		
11	1	39153937	CONTROL TRANSFORMER 500 VA.		
10	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
9	1	23469398	CONTACTOR, 220A		
8	1	23467194	CONTACTOR, BLOWER MOTOR KM4, RSC-12-6AC110		
7	A/R	23464530	RAIL, 35 MM DIN		
6	2	23455520	SUPPRESSOR, SURGE		
5	1	23435019	PANEL, BACK (FIXED SPEED)		
4	1	23139795	SOFT STARTER, SMC-3 (A-B P/N 150-C201NCD)		
3	1	22135818	BREAKER, CIRCUIT 6A - 1P		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		

BOM FOR 23469331

ASSEMBLY, BACKPANEL
(90-110kW - SOLID STATE 60 Hz)
23469331 C



ITEM	QTY.	PART NO.	DESCRIPTION	MATL.	SHT/Z
29	2	22065864	SUPPRESSOR, ARC		
28	10	93469633	TERMINAL, EARTH M4x6.P		
27	1	89296271	CONTACTOR, 260A 1NO/1NC AUX CONT		
26	2	54729520	CONNECTOR, 12 WAY		
25	1	54729496	CONNECTOR, 8 WAY		
24	2	54719182	CONNECTOR, 2 WAY		
23	1	54689872	BREAKER, CIRCUIT -		
22	1	54689864	BREAKER, CIRCUIT		
21	1	54641337	ASSEMBLY, PCB SGN - POWER SUPPLY		
20	2	54612940	TERMINAL, END PLATE GREY		
19	2	39266200	RELAY, K1-2 N37 KW - 300 HP		
18	4	39252937	STOP, DIN RAIL N37-75		
17	54	39252903	BLOCK, TERMINAL		
16	1	39242375	PLUG, 10 POSITION		
15	4	39239140	STANDOFF, HEX #4 X .375 LONG ALUMINIUM		
14	1	39204441	PLUG, 3 POSITION		
13	2	39191655	PLUG, 16 POSITION		
12	1	39186101	PLUG, 4 POSITION		
11	1	39153937	CONTROL TRANSFORMER 500 VA.		
10	1	32342115	BUS, ALUMINIUM GROUNDING (7 TAPS)		
9	1	23518469	CONTACTOR, 17A A16-30-10		
8	A/R	23464530	RAIL, 35 MM DIN		
7	1	23435019	PANEL, BACK (FIXED SPEED)		
6	1	23138795	SOFT STARTER, SMC-3 (A-B P/N 150-C201NCD)		
5	1	22135818	BREAKER, CIRCUIT 6A - 1P		
4	1	22102644	SUPPRESSOR, SURGE RC A45 TO A300		
3	1	22101844	SUPPRESSOR, SURGE RC A50 TO A320		
2	A/R	22101224	COVER, WIRING DUCT, 1"		
1	A/R	22101208	DUCT, WIRING, 1" X 3"		
BOM FOR 23466667					

ASSEMBLY, BACKPANEL
(90-110kW - SOLID STATE 50 Hz)
23466667 C

STARTER BOX PARTS

STARTER BOX ENCLOSURE ASSEMBLIES

PART NO.	DESCRIPTION
23463508	ASSEMBLY, FIXED SPEED STARTER BOX ENCLOSURE
23464712	ASSEMBLY, VSD DRIVE BOX ENCLOSURE

CONTROLLER ASSEMBLIES

PART NO.	DESCRIPTION
23464688	ASSEMBLY, SG CONTROLLER (FIXED SPEED)
23464704	ASSEMBLY, SG _{NeV} CONTROLLER (VSD)

DRIVE ASSEMBLIES

PART NO.	DESCRIPTION
23464837	ASSEMBLY, DRIVE LEROY (MDV180TIR) 110KW
23532542	ASSEMBLY, DRIVE LEROY (MDV180TIR) 90KW

MMS ASSEMBLIES

PART NO.	DESCRIPTION
23466634	ASSEMBLY, MMS (BENSHAW 1.0A - 1.6A)
23466642	ASSEMBLY, MMS (ABB 1.0A - 1.6A)
23466659	ASSEMBLY, MMS (BENSHAW 6.0A - 10.0A)
23466709	ASSEMBLY, MMS (ABB 6.3A - 9.0A)
23466717	ASSEMBLY, MMS (BENSHAW 5.0A - 8.0A)
23466725	ASSEMBLY, MMS (BENSHAW 1.0A - 1.6A) WITH TRANSFORMER

LINE REACTOR ASSEMBLIES

PART NO.	DESCRIPTION
23464845	ASSEMBLY, LINE REACTOR (90-110kW - 460V 60 Hz)
23466683	ASSEMBLY, LINE REACTOR (90-110kW - 380V 50/60 Hz)

MISCELLANEOUS HARDWARE

PART NO.	DESCRIPTION
96727565	BOLT, HEX FLANGE M6-1 X 10.0 LONG
96704812	NUT, HEX STYLE 1 COURSE THD M10-1.50
96704291	NUT, HEX STYLE 1 COURSE THD M12-1.75
96703756	NUT, HEX STYLE 1 COURSE THD M4-.7
96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25
39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG
96738372	SCREW, HEX HEAD M16-2.00 X 25.0 LONG
22517734	SCREW, M3 X .5 X 12 PHILLIPS PAN HEAD THREAD FORMING
96743729	SCREW, SOCKET HEAD M6 X 16.0 LONG
96954839	SCREW, TAPPING INDENTED HEX WASHER HEAD TYPE C .25 X .50 LONG
23524879	WASHER, FLAT M6, COPPER
95929055	WASHER, LOCK EXTERNAL TOOTH FLAT TYPE A, .25
96705165	WASHER, PRODUCT GRADE A M4
96719745	WASHER, PRODUCT GRADE A M8
96718655	WASHER, SPRING LOCK, CURVED TYPE A, M10
96739933	WASHER, SPRING LOCK, CURVED TYPE A, M12
96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16
96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8

MISC PARTS

PART NO.	DESCRIPTION
23468762	LUG, GROUND
45657103	FRAME, USER INTERFACE

ELECTRICAL SCHEMATICS

PART NO.	DESCRIPTION
23378540	SCHEMATIC, ELECTRICAL WIRING (FIXED SPEED - SOFT STARTER)
23382245	SCHEMATIC, ELECTRICAL WIRING (VSD)
23771933	SCHEMATIC, ELECTRICAL WIRING (FIXED SPEED - Y/D)



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Part Number :

23558083

Title :

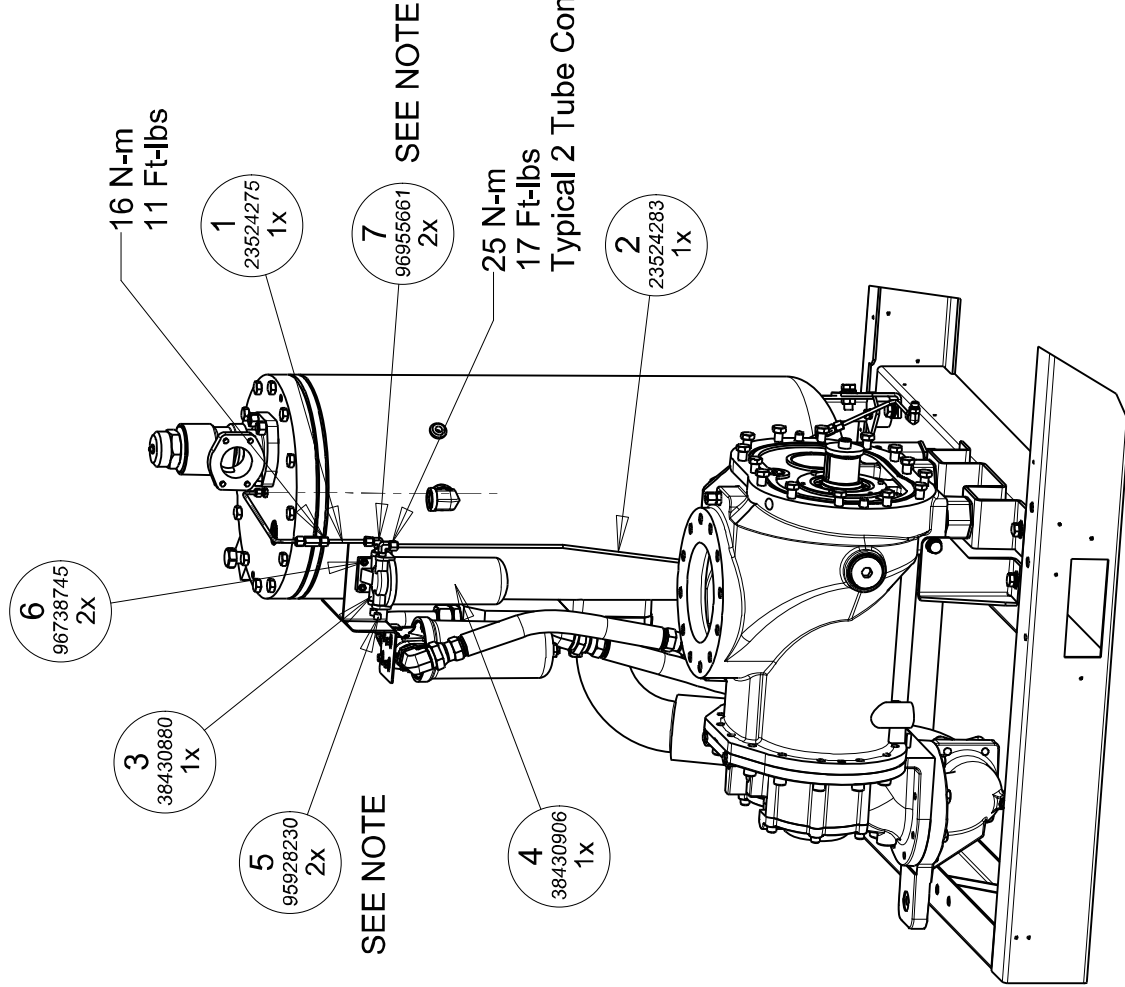
ASSEMBLY INST., FOOD GRADE

REV

A

Item	Part No.	Description	Qty.
1	23524275	TUBE, SCAVENGE TO FILTER ON FOOD GRADE COOLANT	1
2	23524283	TUBE, FILTER TO AIREND ON FOOD GRADE COOLANT	1
3	38430880	BASE, FILTER MOUNTING	1
4	38430906	FILTER, ION EXCHANGE RESIN 125-450HP	1
5	95928230	PLUG, SOCKET .25 NPT	2
6	96738745	SCREW, TAPPING HEX WASHER HEAD M6X 20.00 LONG	2
7	96955661	ELBOW, 90 .25 ORFS X .25 NPTF	2

Description
ASSEMBLE FOOD GRADE FILTER BASE AND PIPING TO TANK



SEE NOTE

SEE NOTE

NOTE: APPLY LOCTITE 545 W/PRIMER 7649 TO ALL NPT THREADS.



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Part Number : **23558083**

REV **A**

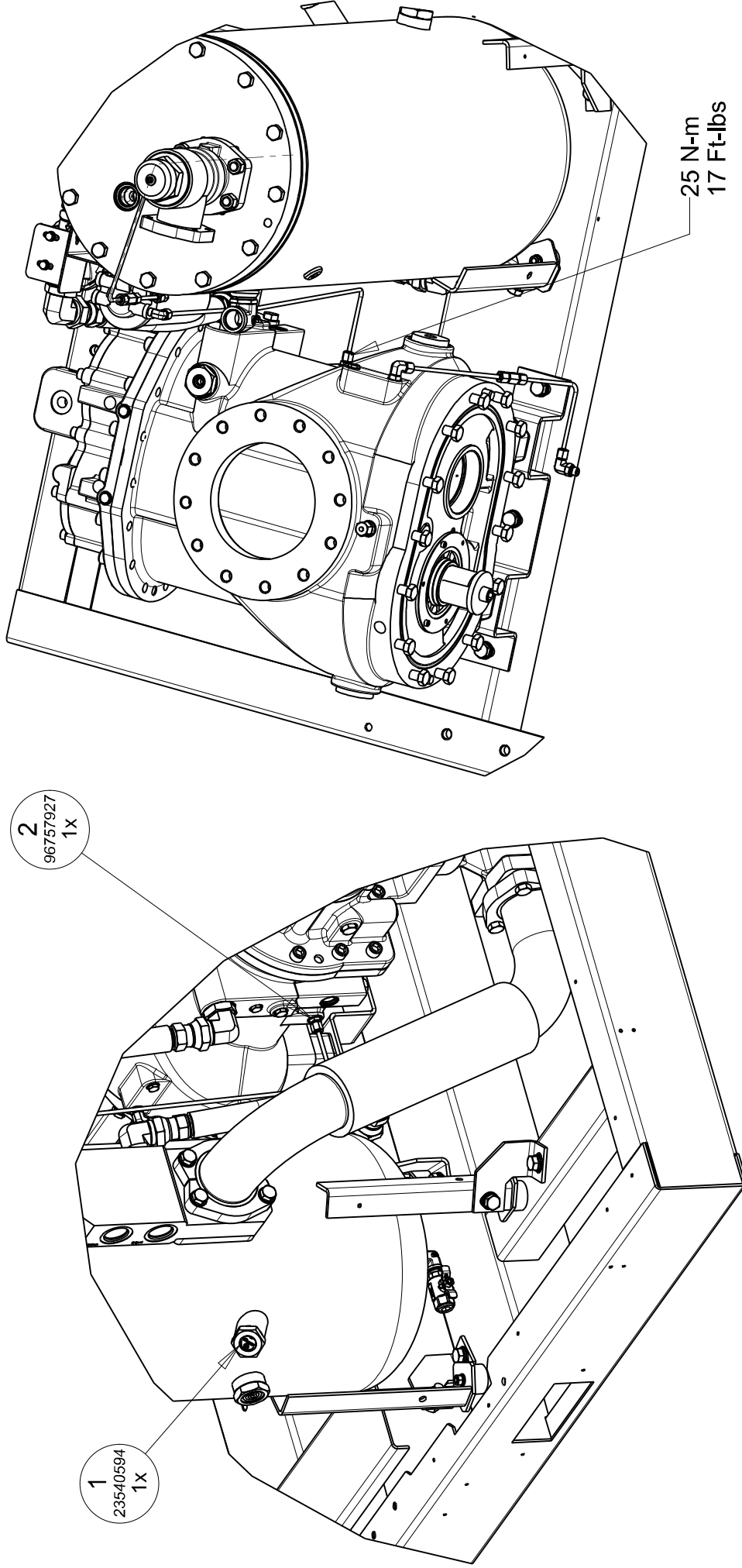
144

Title :

ASSEMBLY INST., FOOD GRADE

Description
ASSEMBLE TUBE AND FITTINGS TO AIREND

Item	Part No.	Description	Qty.
1	23540594	DECAL, X-TEND	1
2	96757927	CONNECTOR .25 TUBE X M14	1





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Part Number :

23469901

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV
B

Item	Part No.	Description	Qty.
1	SEE LIST	INLET VALVE	1
2	96716337	SCREW, HEX HEAD M20-2.50 X 60.0 LONG	6
3	96737721	WASHER, SPRING LOCK, CURVED TYPE A, M20	6
4	96957261	ORING, STANDARD -272 9.500 ID X .125 WIDTH	1

Description
ASSEMBLE INLET VALVE TO AIREND.

1
SEE LIST
1x

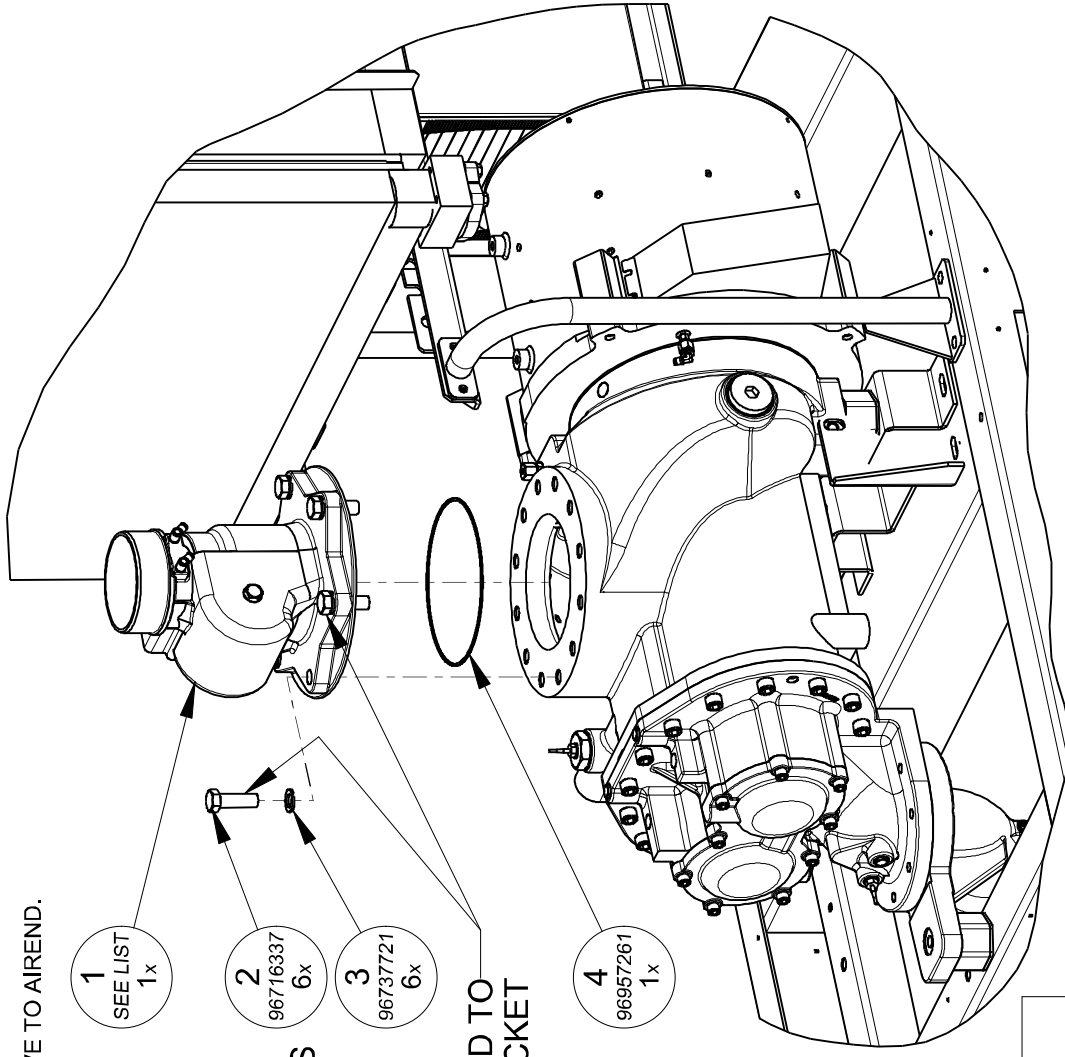
2
96716337
6x

3
96737721
6x

393 N-M
290 FT-LBS

4
96957261
1x

THESE TWO BOLTS ALSO USED TO
ATTACH AIR FILTER SUPPORT BRACKET



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	WHERE USED
1	23421191	INLET VALVE W/MODULATION HPKG 120-P+VVF18+PRN FXD SPD	FIXED SPEED, MODULATION
	23421183	INLET VALVE HPKG120-A + VVF18 FXD SPD	FIXED SPEED, ON/OFF
	23421209	INLET VALVE HK 120 VARIABLE SPEED	VARIABLE SPEED



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146

Part Number : **23469901**

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

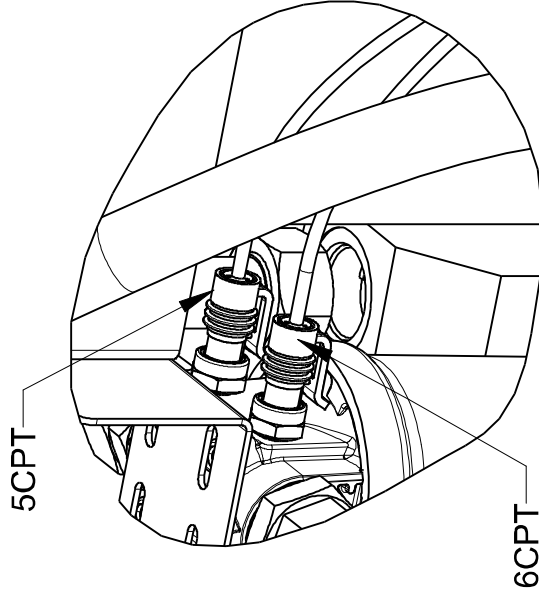
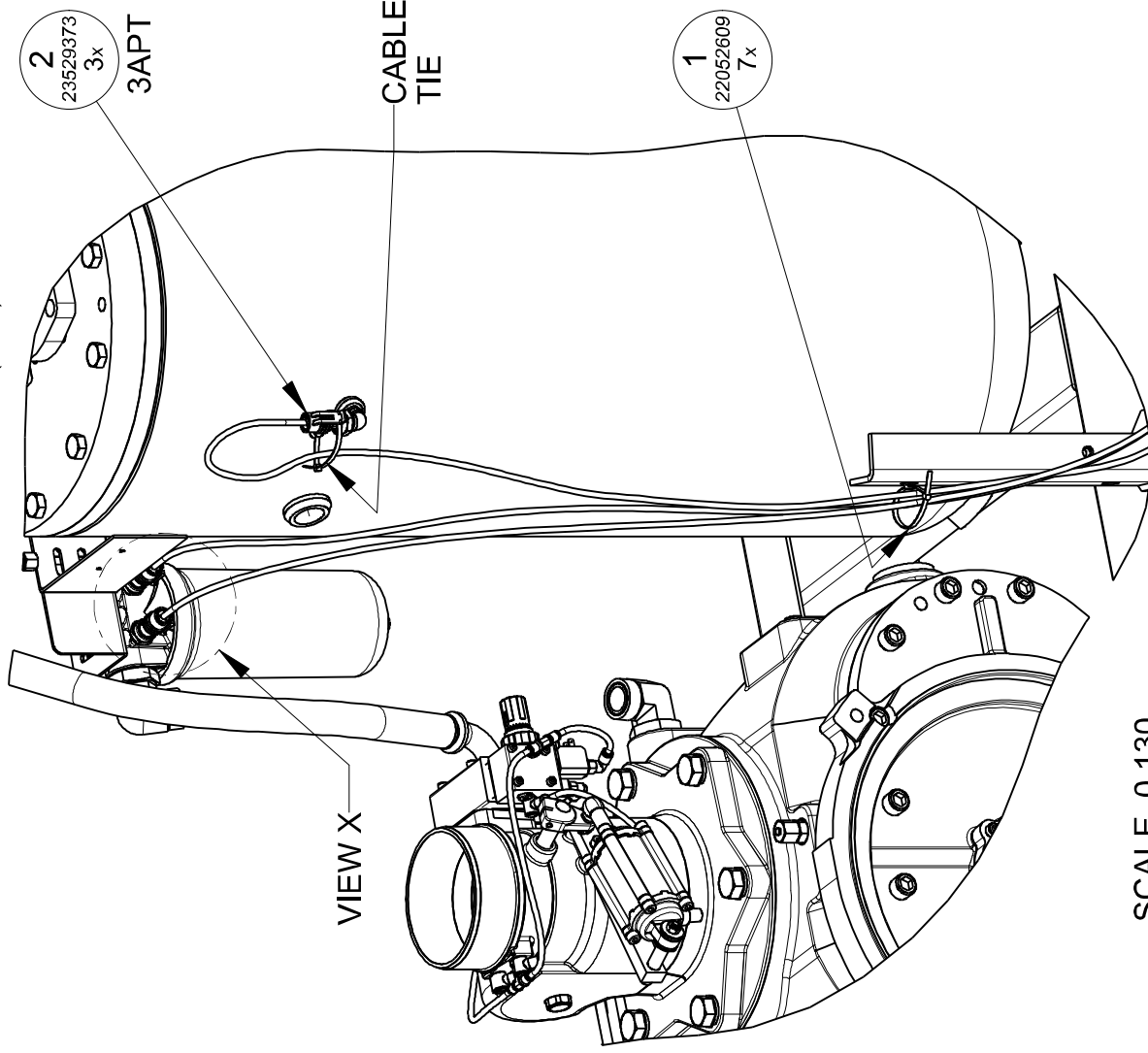
Item	Part No.	Description	Qty.
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	7
2	23529373	CABLE, TRANSDUCER SGv (LENGTH 4825MM)	3

Description

ROUTE WET SUMP PRESSURE TRANSDUCER CABLE TO STARTER BOX. ---(3APT)---

NOTE:

ROUTE CABLE UNDER BASE AND UNDER SEPARATOR TANK. DO NOT TIGHTEN CABLE TIES UNTIL ALL CABLES HAVE BEEN ROUTED.



SCALE 0.130
REFER SHEET 5 FOR CABLE ROUTING
AND TIES UNDER BASE



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Part Number : **23469901**

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

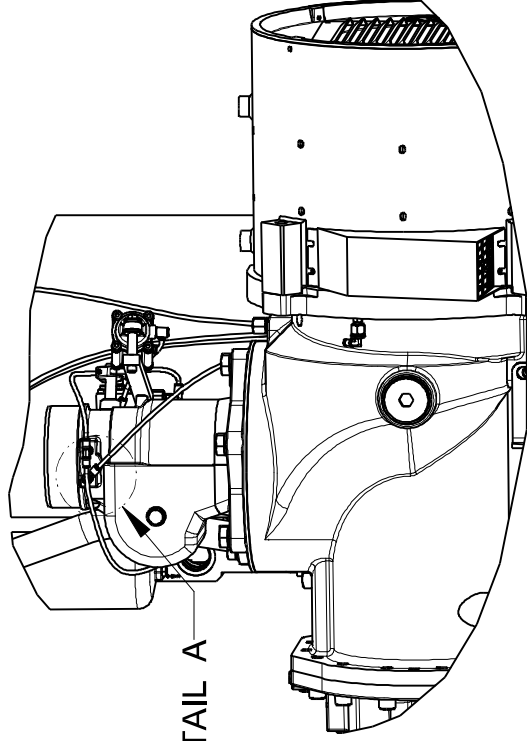
Item	Part No.	Description	Qty.
1	23452303	TUBE, NYLON 6MM OD BLUE	A/R
2	39875570	CABLE, TRANSDUCER INTELLISYS SG	1

Description

ROUTE NYLON TUBE FROM INLET VALVE TO TRANSDUCER AT STARTER BOX AND INSTALL CABLE. ---(1AVPT)---

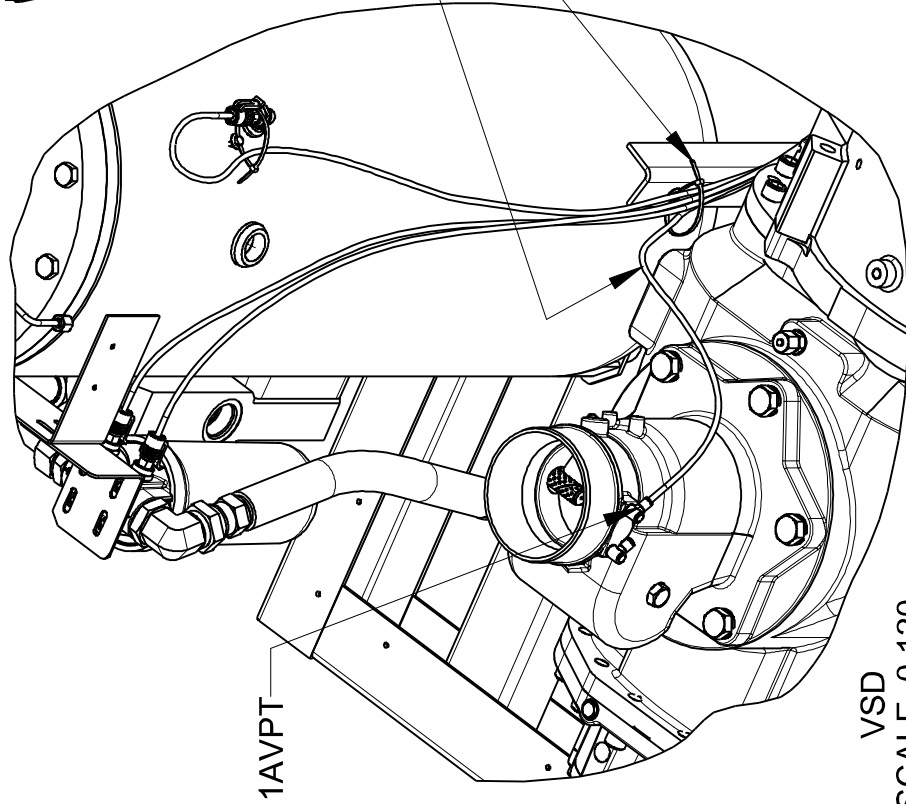
NOTE:

ROUTE CABLE UNDER BASE
AND UNDER SEPARATOR TANK.
DO NOT TIGHTEN CABLE TIES UNTIL
ALL CABLES HAVE BEEN ROUTED.



SEE DETAIL A

MODULATION ONLY
SCALE 0.090



1AVPT

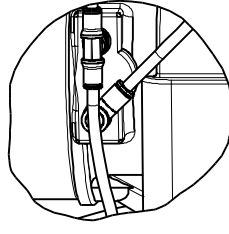
1
23452303
A/Rx

CABLE TIES

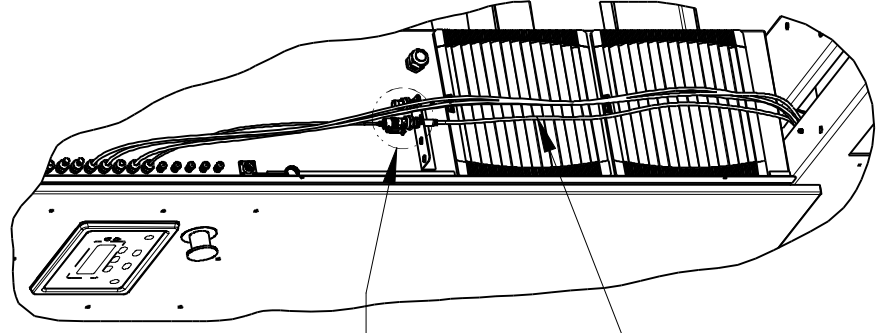
2
39875570
1x

1AVPT

VSD
SCALE 0.120

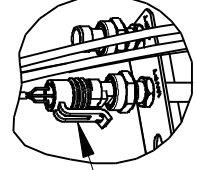


DETAIL A
SCALE 0.250



SEE DETAIL C

1
23452303
A/Rx



DETAIL C
SCALE 0.200



Part Number : 23469901

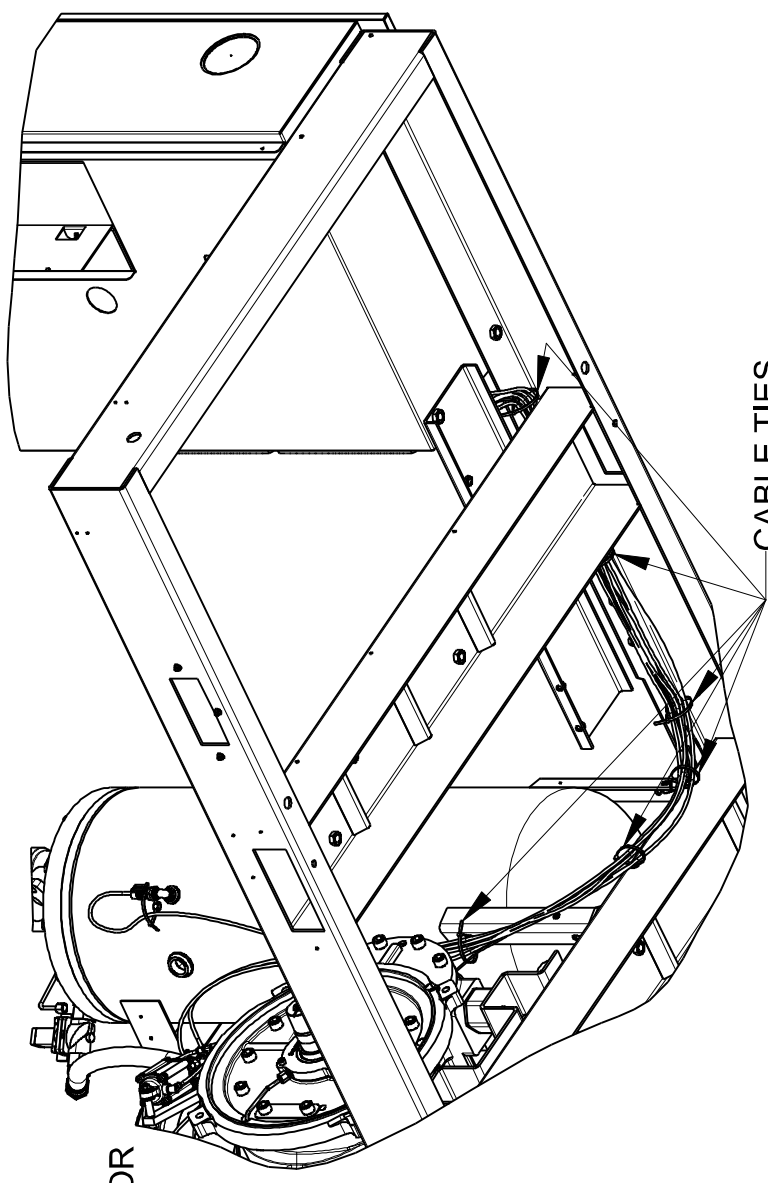
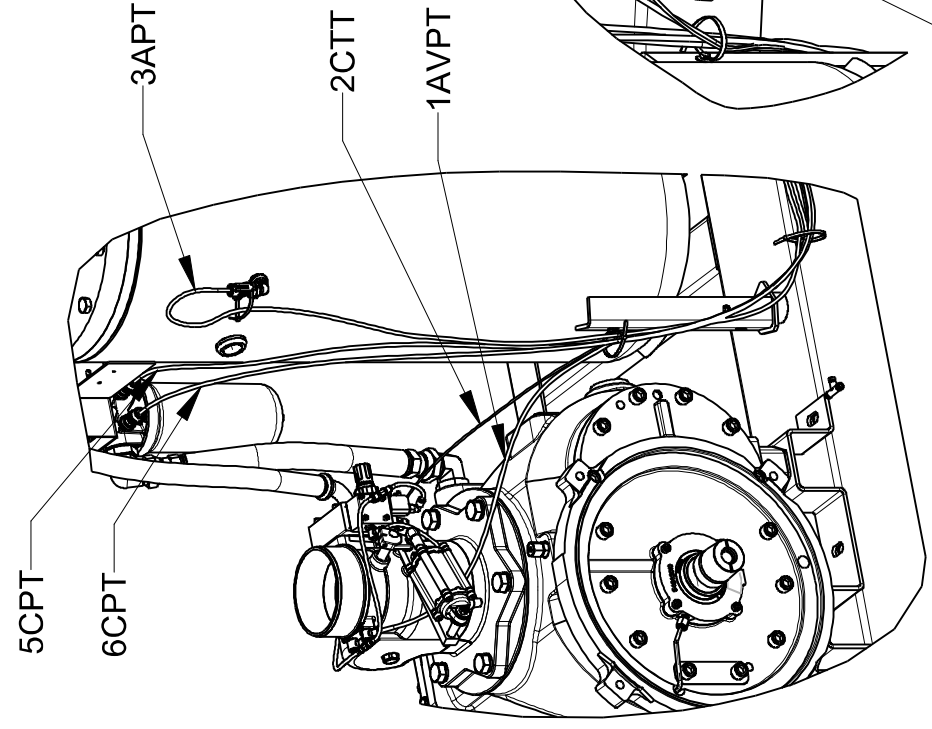
148

REV
B
Title : **ASSEMBLY INST., CONTROLS/
INLET VALVE**

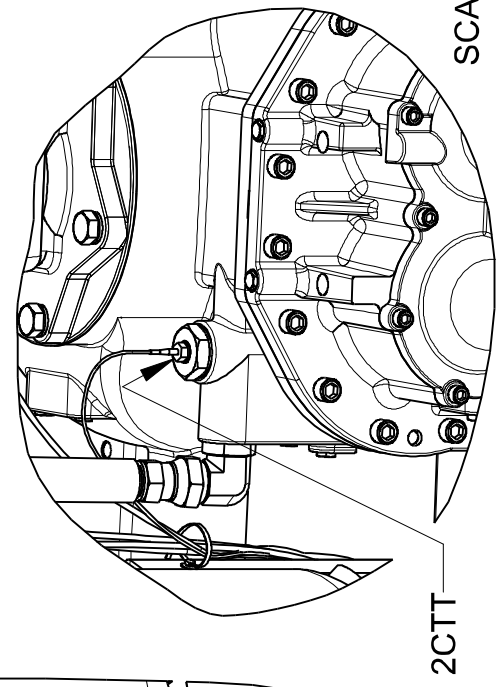
Item	Part No.	Description	Qty.	Description
				ROUTE OIL INJECTION TEMPERATURE SENSOR CABLE TO STARTER BOX. ---(2CTT)---

NOTE:

ROUTE CABLE UNDER BASE AND UNDER SEPARATOR TANK. DO NOT TIGHTEN CABLE TIES UNTIL ALL CABLES HAVE BEEN ROUTED.



VIEW LOOKING FROM UNDER BASE.
SCALE 0.070
BUNDLE WITH 5CPT, 6CPT, 2CTT, 3APT & 1AVPT



SCALE 0.130



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Part Number :

23469901

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

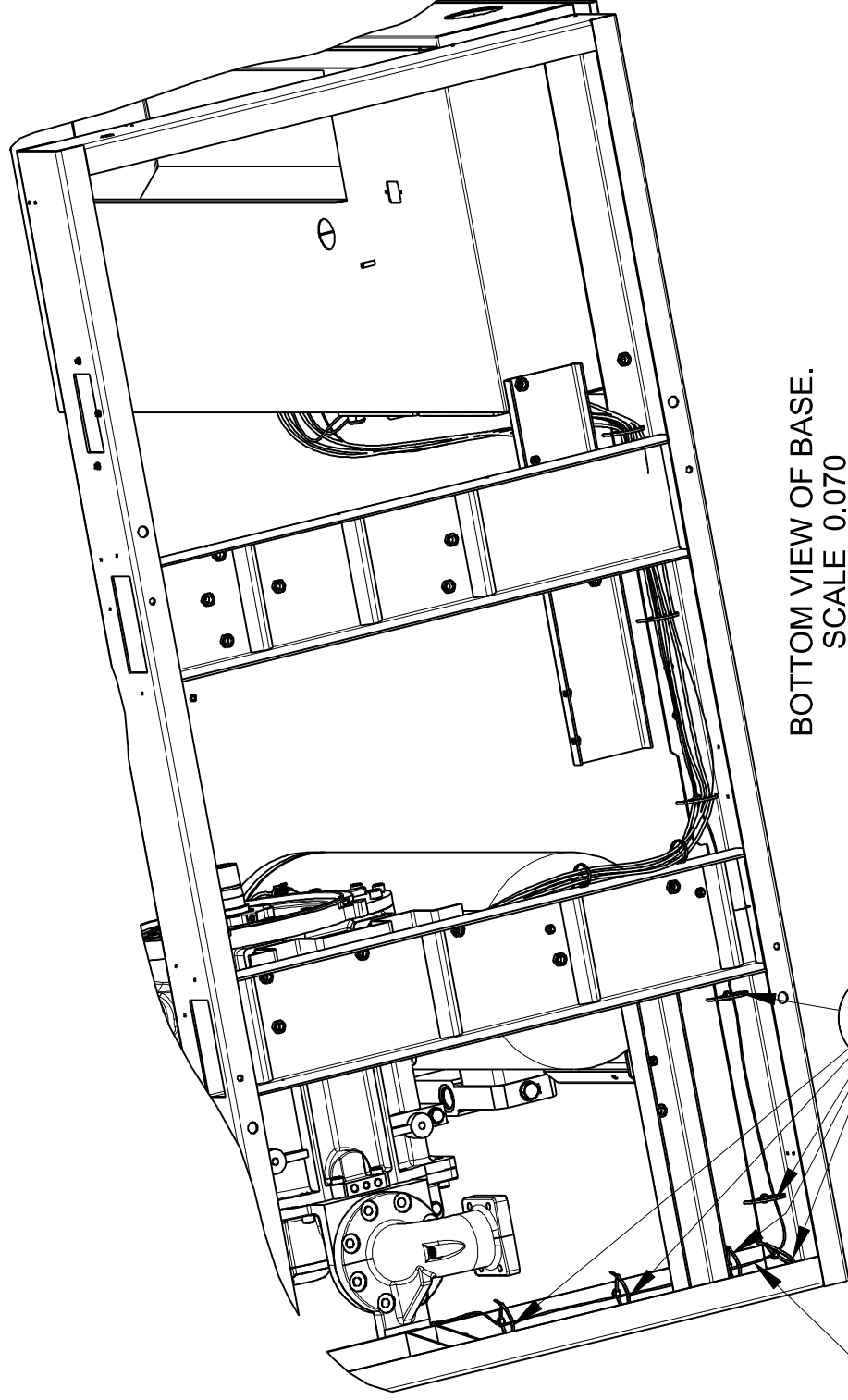
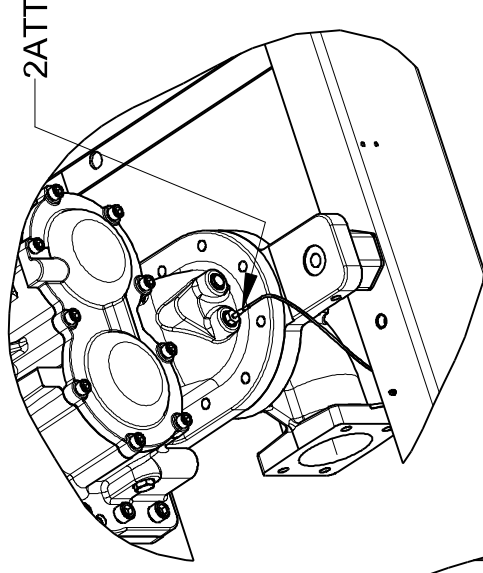
REV

B

Item	Part No.	Description	Qty.	Description
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	7	ROUTE AIREND DISCHARGE TEMPERATURE SENSOR CABLE TO STARTER BOX. --(2ATT)--

NOTE:

ROUTE CABLE UNDER BASE AND UNDER SEPARATOR TANK.
DO NOT TIGHTEN CABLE TIES UNTIL ALL CABLES HAVE BEEN ROUTED.



BOTTOM VIEW OF BASE.
SCALE 0.070
BUNDLE WITH 2ATT

—2ATT CABLE

—CABLE TIE



Part Number : **23469901**

150

Title :

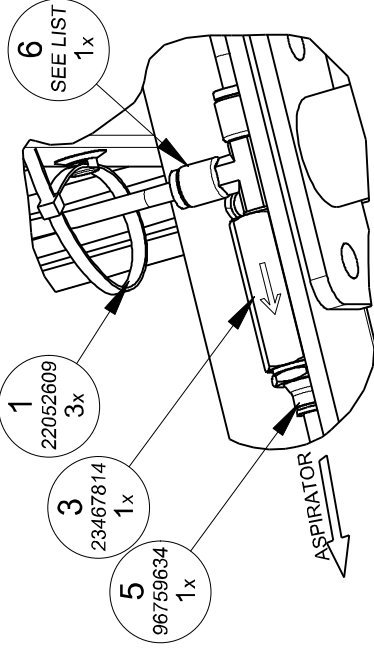
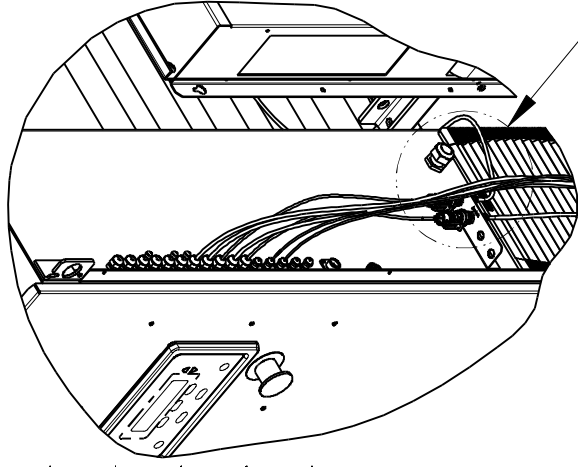
**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Item	Part No.	Description	Qty.
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	3
2	23452303	TUBE, NYLON 6MM OD BLUE	A/R
3	23467814	STRAINER, ORIFICE 1/4" X 1/4" BSPP FEMALE	1
4	39875570	CABLE, TRANSDUCER INTELLISYS SG	1
5	96759634	CONNECTOR, PUSH IN G1/4 X 6 MM TUBE	1
6	SEE LIST	TEE	1

Description

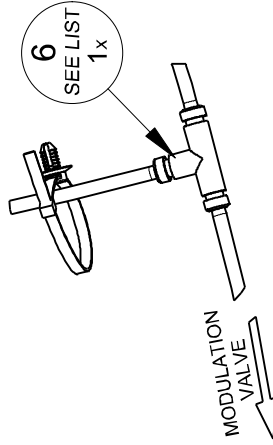
ROUTE NYLON TUBE FOR PACKAGE DISCHARGE PRESSURE & MODULATION FOR FSD; ASPIRATOR FOR VSD. (4APT)



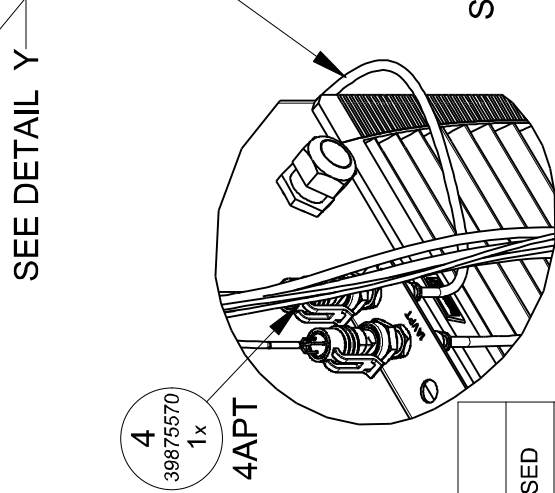
**DETAIL B
VSD ONLY
SCALE 0.400**

NOTE:

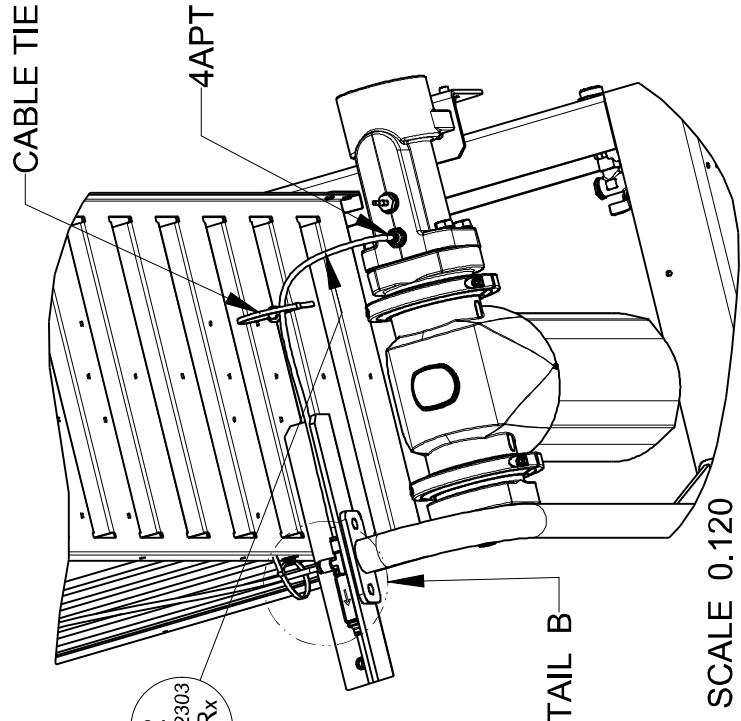
DO NOT TIGHTEN CABLE TIES UNTIL ALL CABLES HAVE BEEN ROUTED.



**DETAIL B
MODULATION ONLY
SCALE 0.300**



**DETAIL Y
SCALE 0.220**



SEE DETAIL B

SCALE 0.120

ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	WHERE USED
6	96759709	TEE, UNION 6mm	FIXED SPEED (MODULATION)
	96759733	TEE, RUN .25 BSPP X 6mm TUBE	VARIABLE SPEED



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Part Number : **23469901**

151

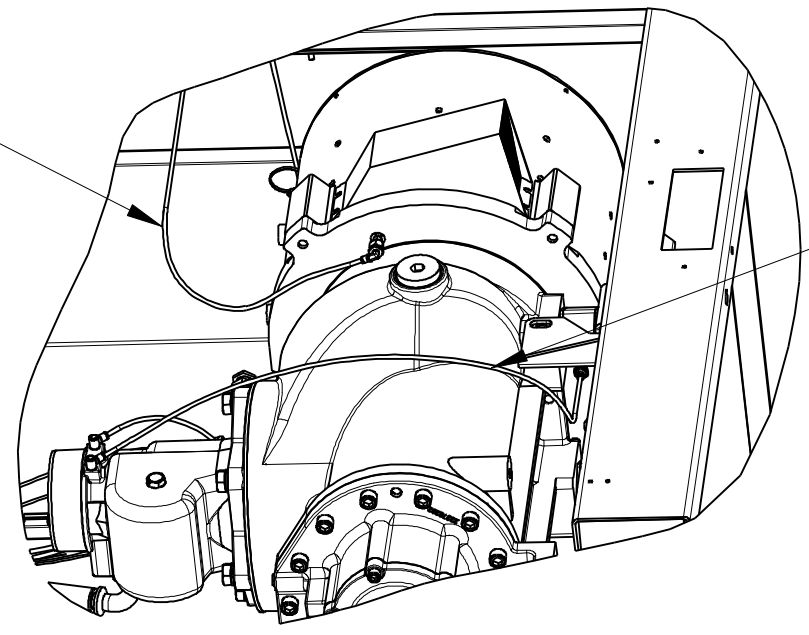
REV

Title : **ASSEMBLY INST., CONTROLS/
INLET VALVE**

Description
ROUTE NYLON TUBE FOR PKG DISCHARGE PRESSURE & MODULATION -FSD; ASPIRATOR -VSD. (4APT) (CONTINUED)

Item	Part No.	Description	Qty.

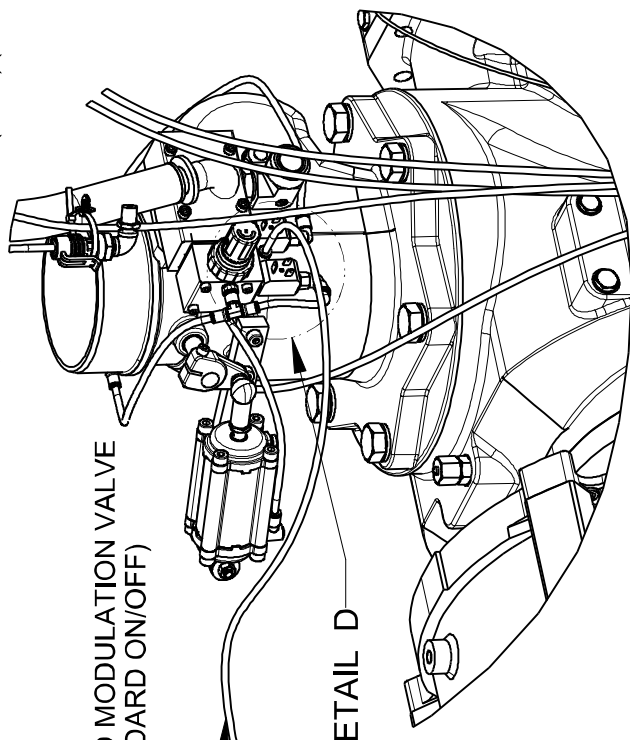
NYLON TUBE FROM
ORIFICE STRAINER
TO ASPIRATOR



NYLON TUBE TO
SEAL ASPIRATOR
AT GEAR CASE

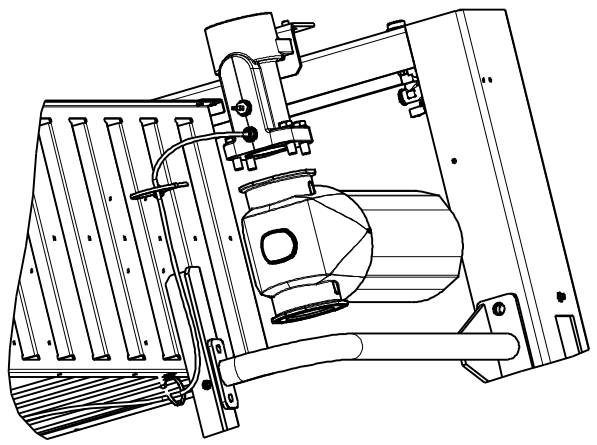
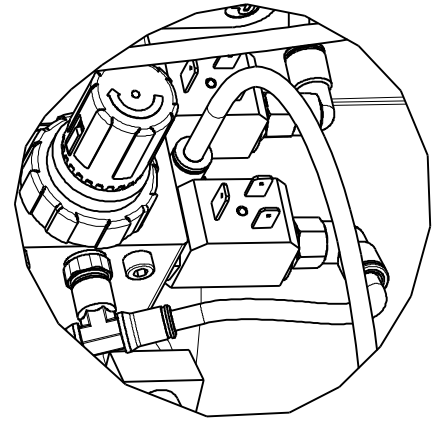
VSD

FROM TEE IN DETAIL B, SHEET 7, TO MODULATION VALVE
(MODULATION ONLY, NOT ON STANDARD ON/OFF)



SEE DETAIL D

FSD & MODULATION
SCALE 0.150



STANDARD ON/OFF ONLY
(WITHOUT TEE)

DETAIL D
SCALE 0.450



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Part Number : **23469901**

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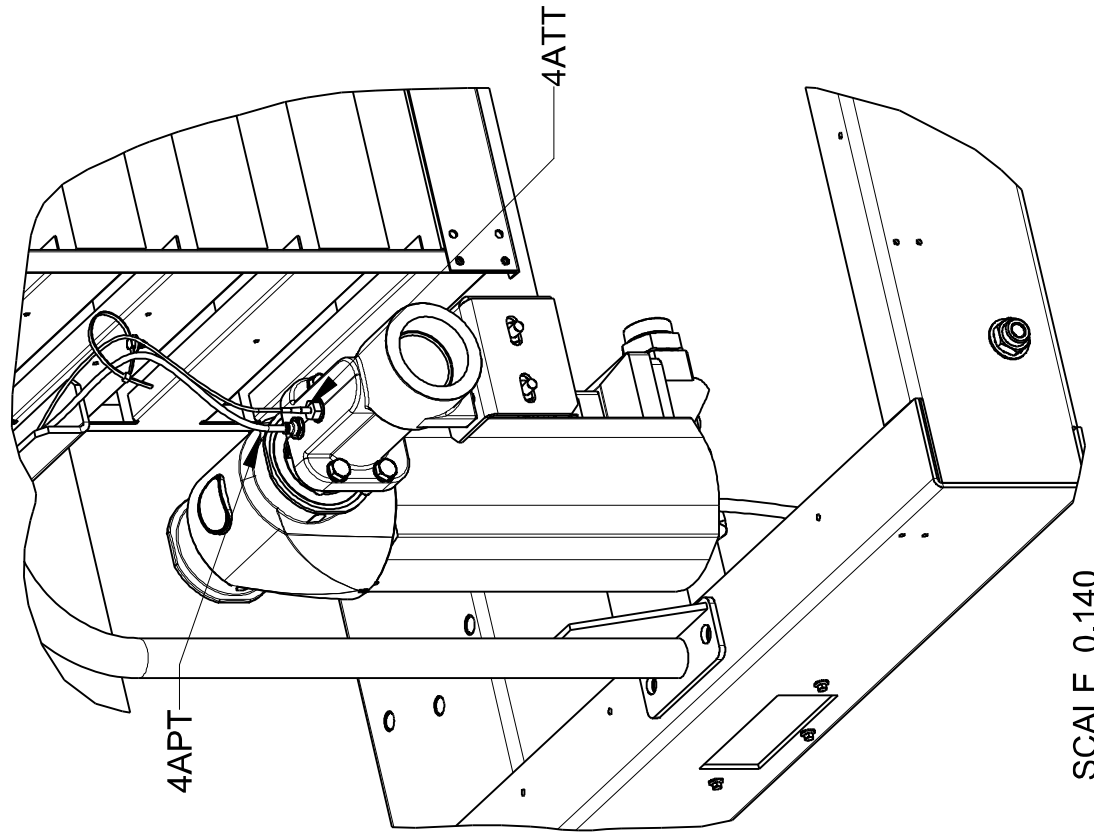
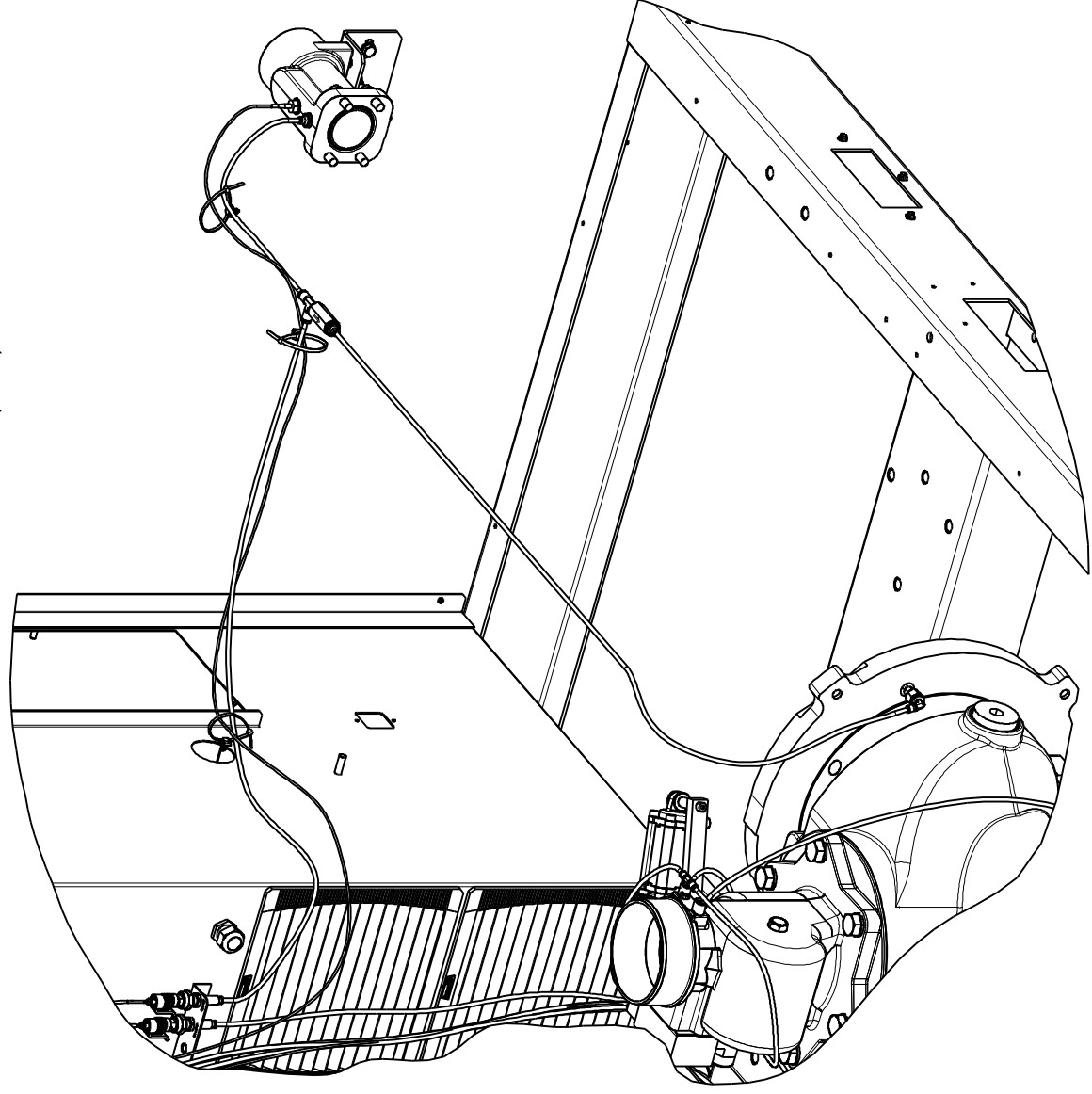
Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Description
ROUTE PACKAGE DISCHARGE TEMPERATURE SENSOR TO STARTER BOX. ---(4ATT)---

Item	Part No.	Description	Qty.



SCALE 0.100
BUNDLE WITH 4ATT & 4APT
VSD SHOWN

SCALE 0.140



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Industrial Technologies

Part Number : **23469901**

153

Title :

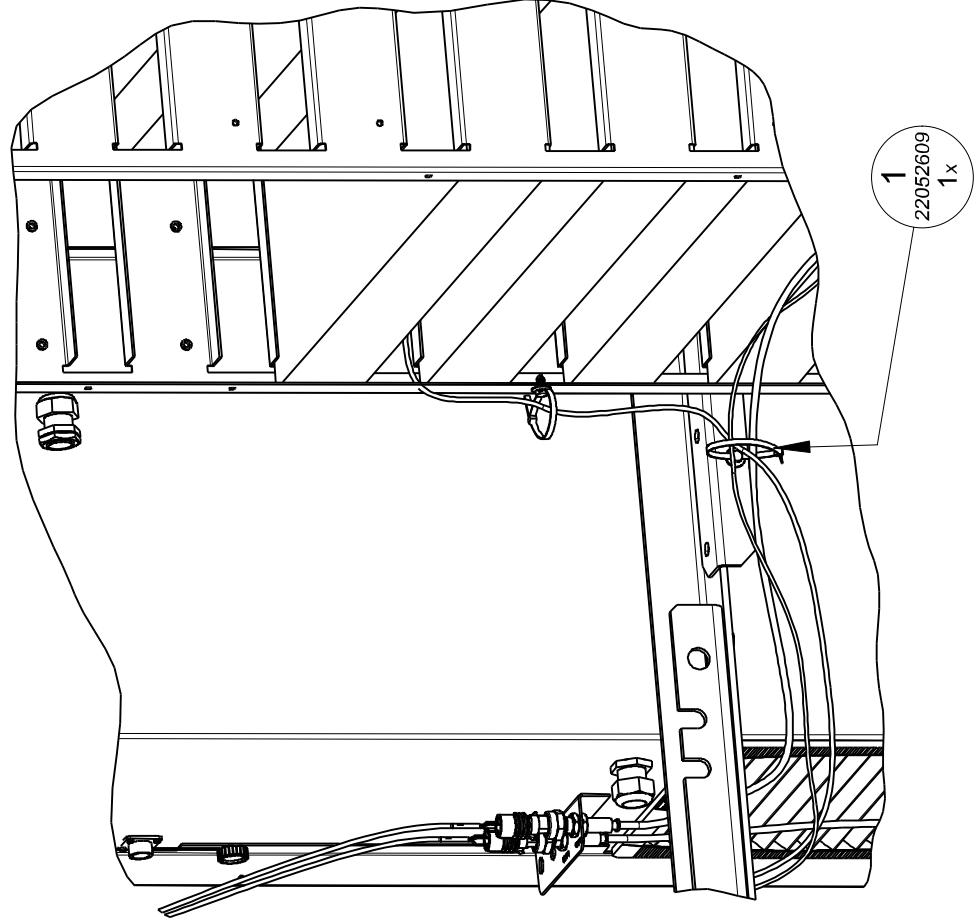
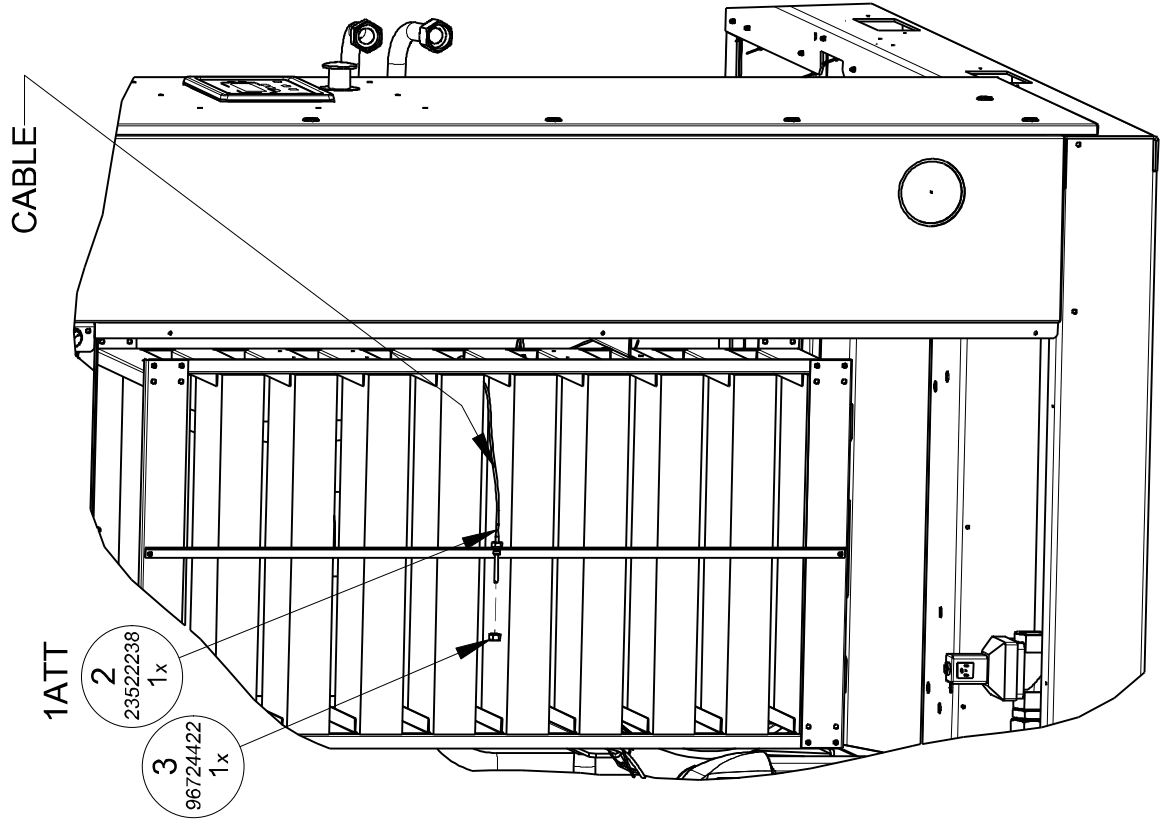
**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Item	Part No.	Description	Qty.
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	1
2	23522238	SENSOR, TEMPERATURE THERMISTOR	1
3	96724422	NUT, HEX THIN CHAMFERED M12X 1.5	1

Description

ROUTE AMBIENT AIR INTAKE TEMPERATURE SENSOR CABLE TO STARTER BOX (VSD). --(1ATT)--



BUNDLE WITH 1ATT, 4ATT & 4APT

SCALE 0.075 ingersollrandproducts.com



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Part Number : **23469901**

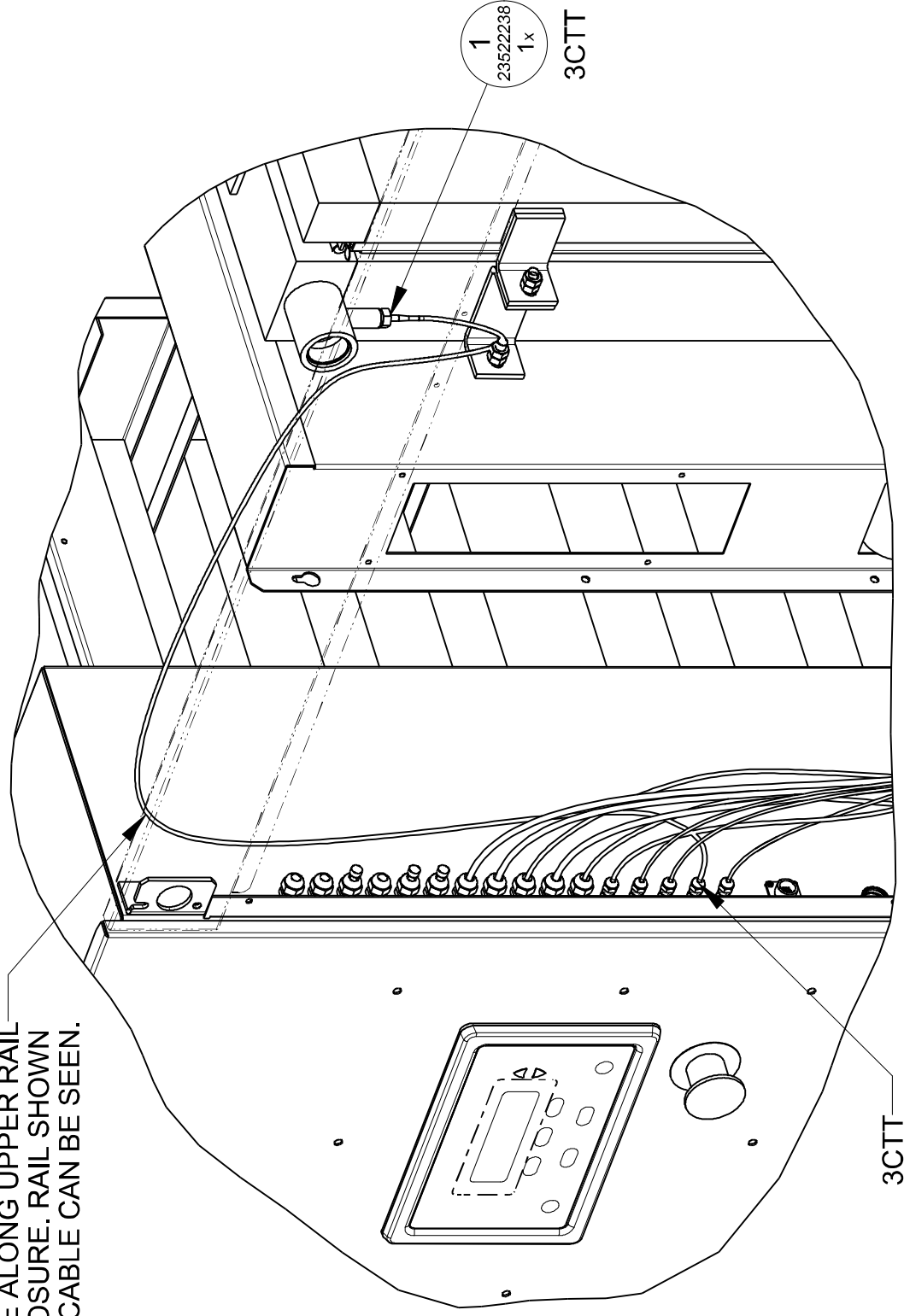
Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Item	Part No.	Description	Qty.	Description
1	23522238	SENSOR, TEMPERATURE THERMISTOR	1	ROUTE COOLER OIL OUT TEMPERATURE SENSOR CABLE TO STARTER BOX (VSD). (AIR COOLED ONLY) --(3CTT)--

ROUTE CABLE ALONG UPPER RAIL OF ENCLOSURE. RAIL SHOWN TRANSPARENT SO THAT CABLE CAN BE SEEN.





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Part Number :

23469901

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

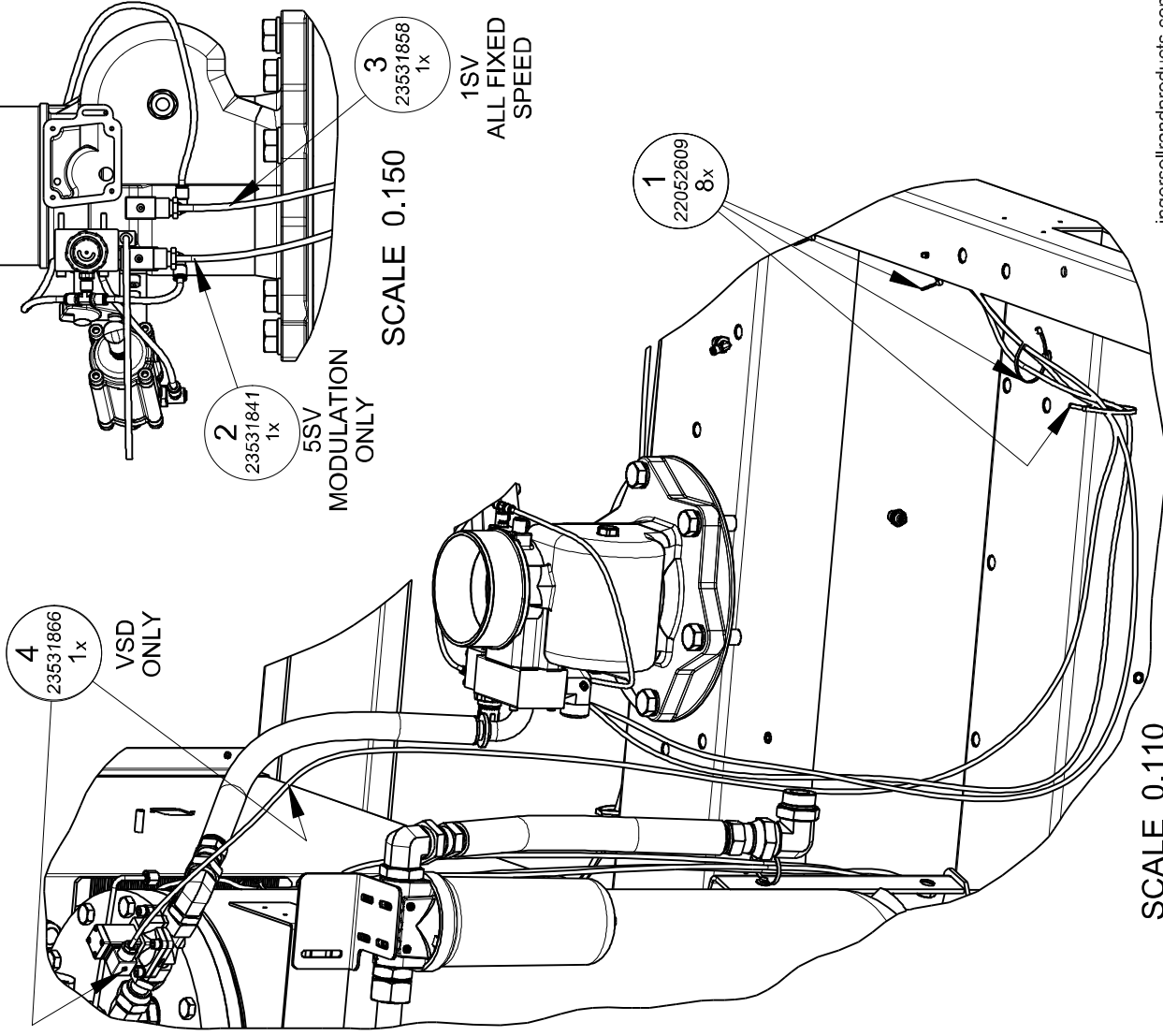
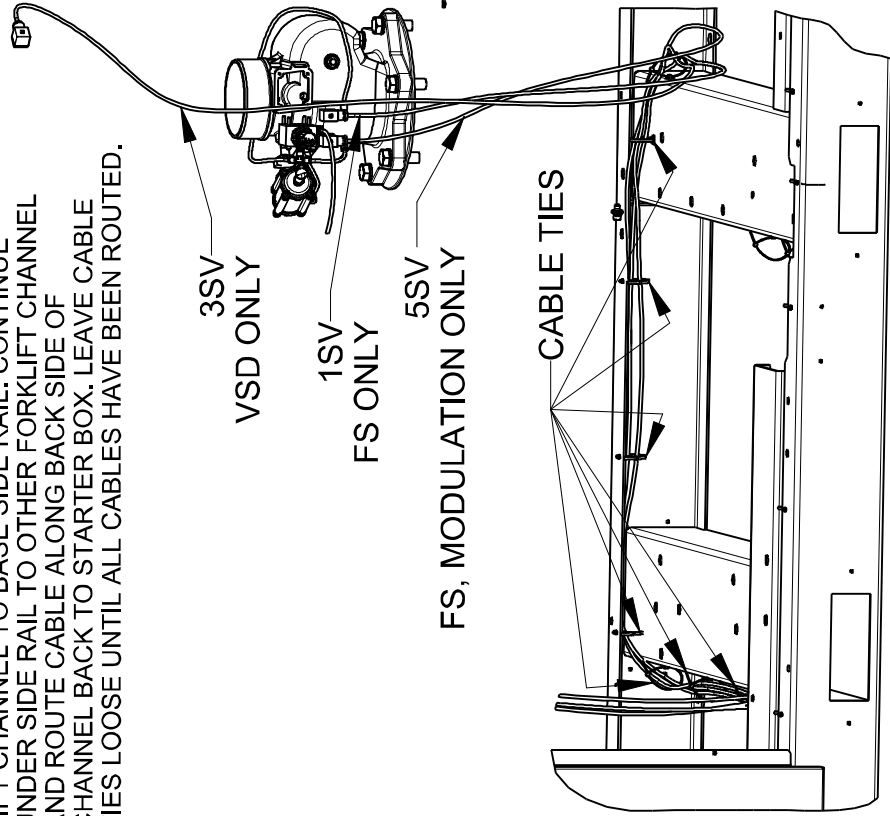
REV **B**

Item	Part No.	Description	Qty.
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	8
2	23531841	CABLE, 5SV (MODULATION) FORM B FX SPEED (LENGTH 5385MM)	1
3	23531858	CABLE, LOAD FORM B FX SPEED (LENGTH 5385MM)	1
4	23531866	CABLE, 3SV (BLOWDOWN) VAR SPEED (LENGTH 5614MM)	1

Description

ROUTE BLOWDOWN VALVE CABLE TO STARTER BOX. --(3SV_1SV_5SV)--

NOTE:
ROUTE CABLE UNDER AIREND ALONG FORK LIFT CHANNEL TO BASE SIDE RAIL. CONTINUE UNDER SIDE RAIL TO OTHER FORKLIFT CHANNEL AND ROUTE CABLE ALONG BACK SIDE OF CHANNEL BACK TO STARTER BOX. LEAVE CABLE TIES LOOSE UNTIL ALL CABLES HAVE BEEN ROUTED.



BUNDLE WITH 1SV, 3SV & 5SV

SCALE 0.110

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Industrial Technologies

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Part Number :

23469901

Title :

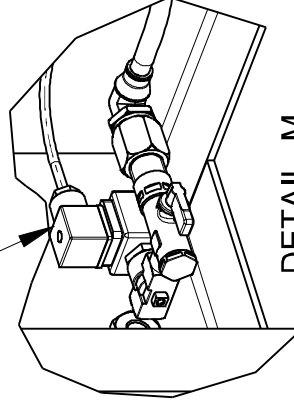
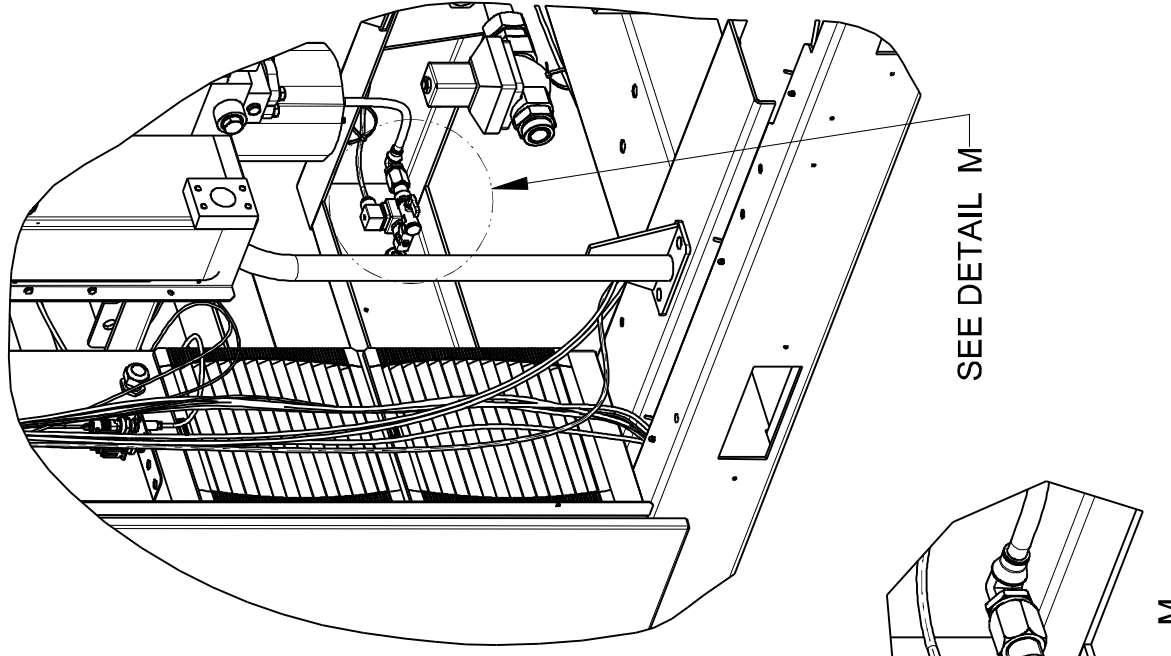
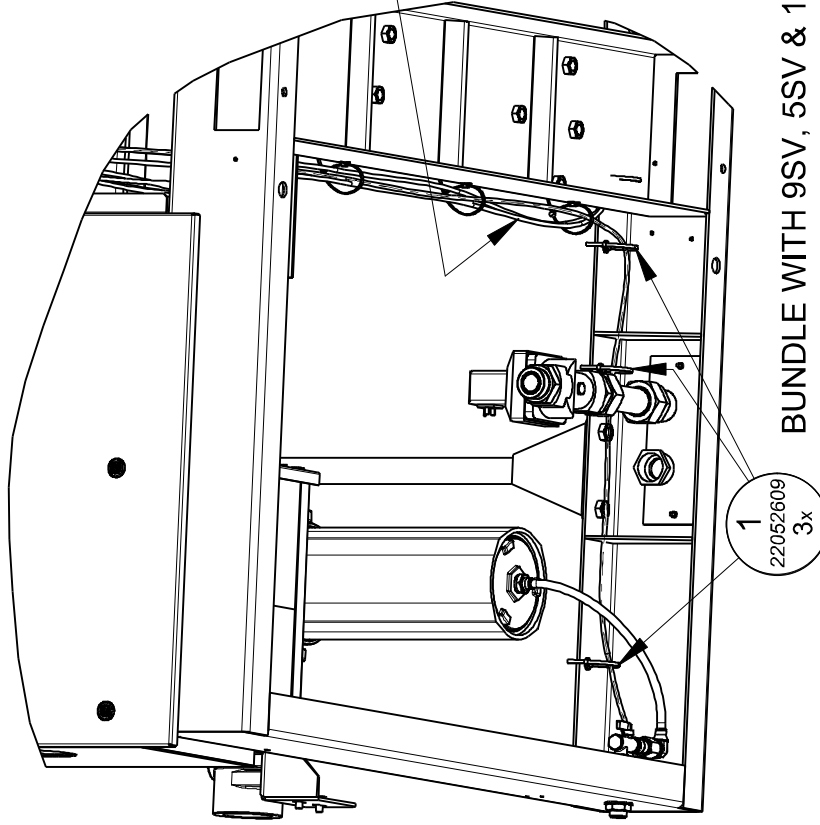
**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV

B

Item	Part No.	Description	Qty.	Description
1	22052609	TIE, CABLE - BASE AND 200MM STRAP	3	ROUTE CONDENSATE VALVE CABLE TO STARTER BOX (STANDARD SHOWN) --(9SV)--
2	SEE LIST	CABLE ASSEMBLY, 9SV	1	

NOTE:
DO NOT TIGHTEN CABLE TIES UNTIL ALL CABLES HAVE BEEN ROUTED.



ALTERNATE PARTS LIST

ITEM	PART NO.	DESCRIPTION	WHERE USED
2	23532104	CABLE, ASSEMBLY, 9SV	STANDARD CONDENSATE
	23529753	CABLE, 20-7 CONDUCTOR 600V5	NO-LOSS CONDENSATION



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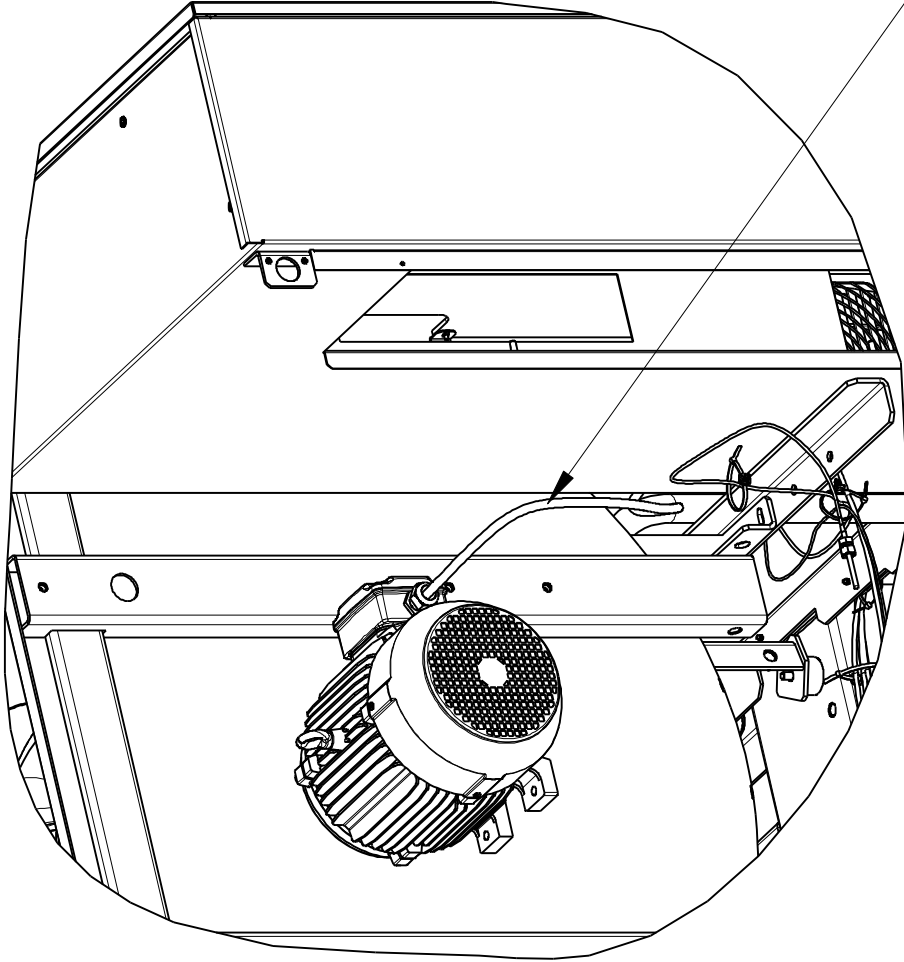
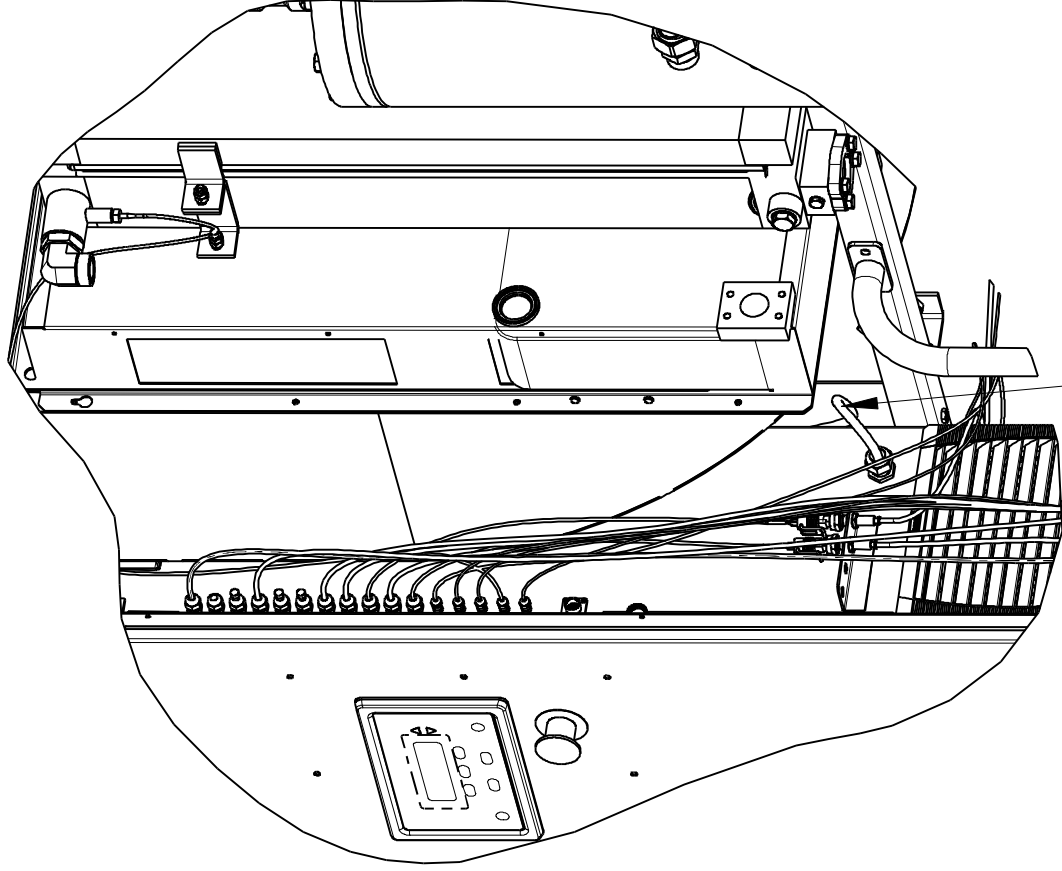
Part Number : **23469901**

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Item	Part No.	Description	Qty.	Description
				ROUTE BLOWER MOTOR CABLE TO STARTER BOX. --(AIR COOLED ONLY)--



FM
(FAN MOTOR CABLE)



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158

Part Number :

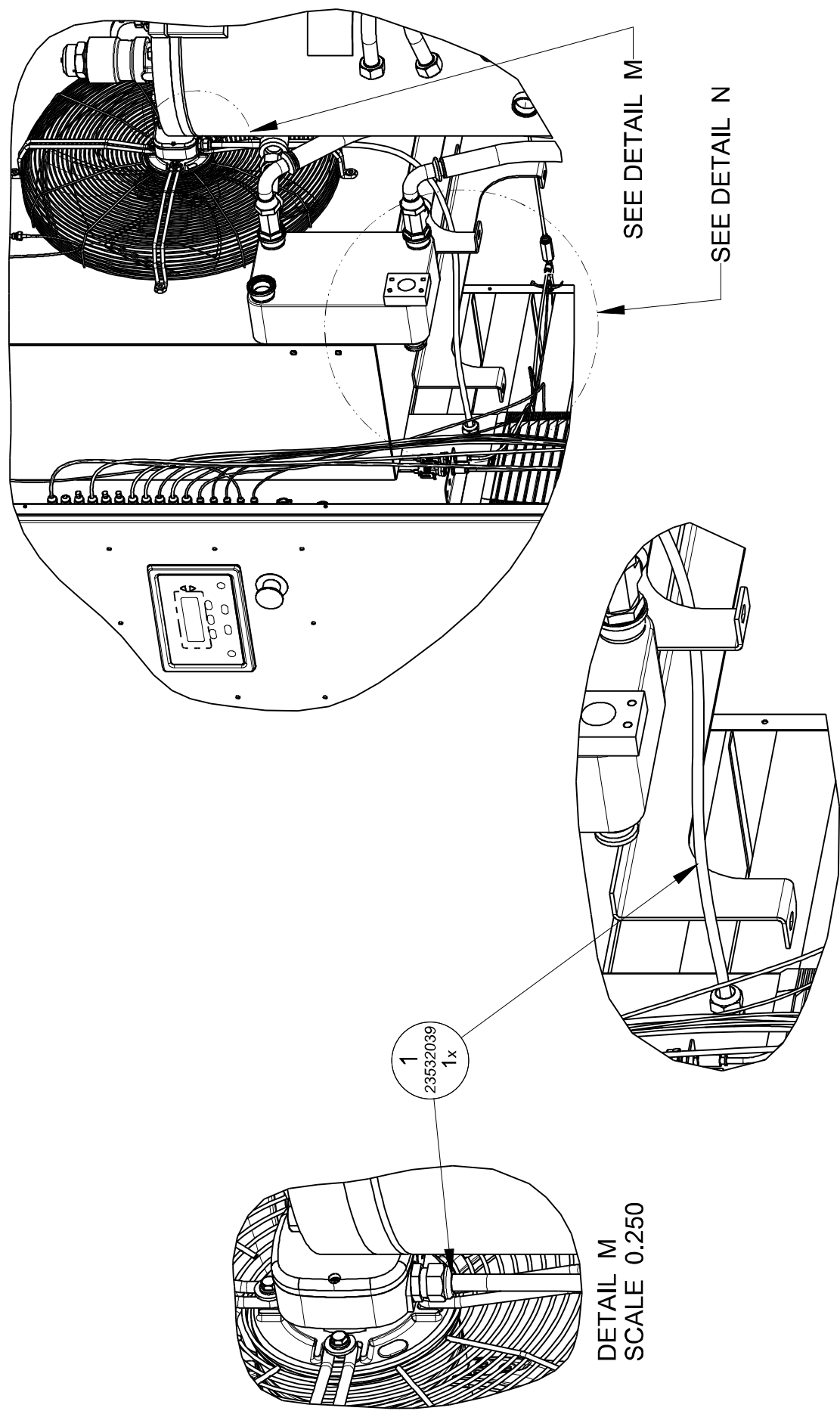
23469901

Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Item	Part No.	Description	Qty.	Description
1	23532039	CABLE, ASSEMBLY 14 AWG X 1544 FAN MOTOR	1	ROUTE FAN MOTOR CABLE TO STARTER BOX. ---(WATER COOLED ONLY)---



DETAIL M
SCALE 0.250

DETAIL N
SCALE 0.160



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Industrial Technologies

Part Number : **23469901**

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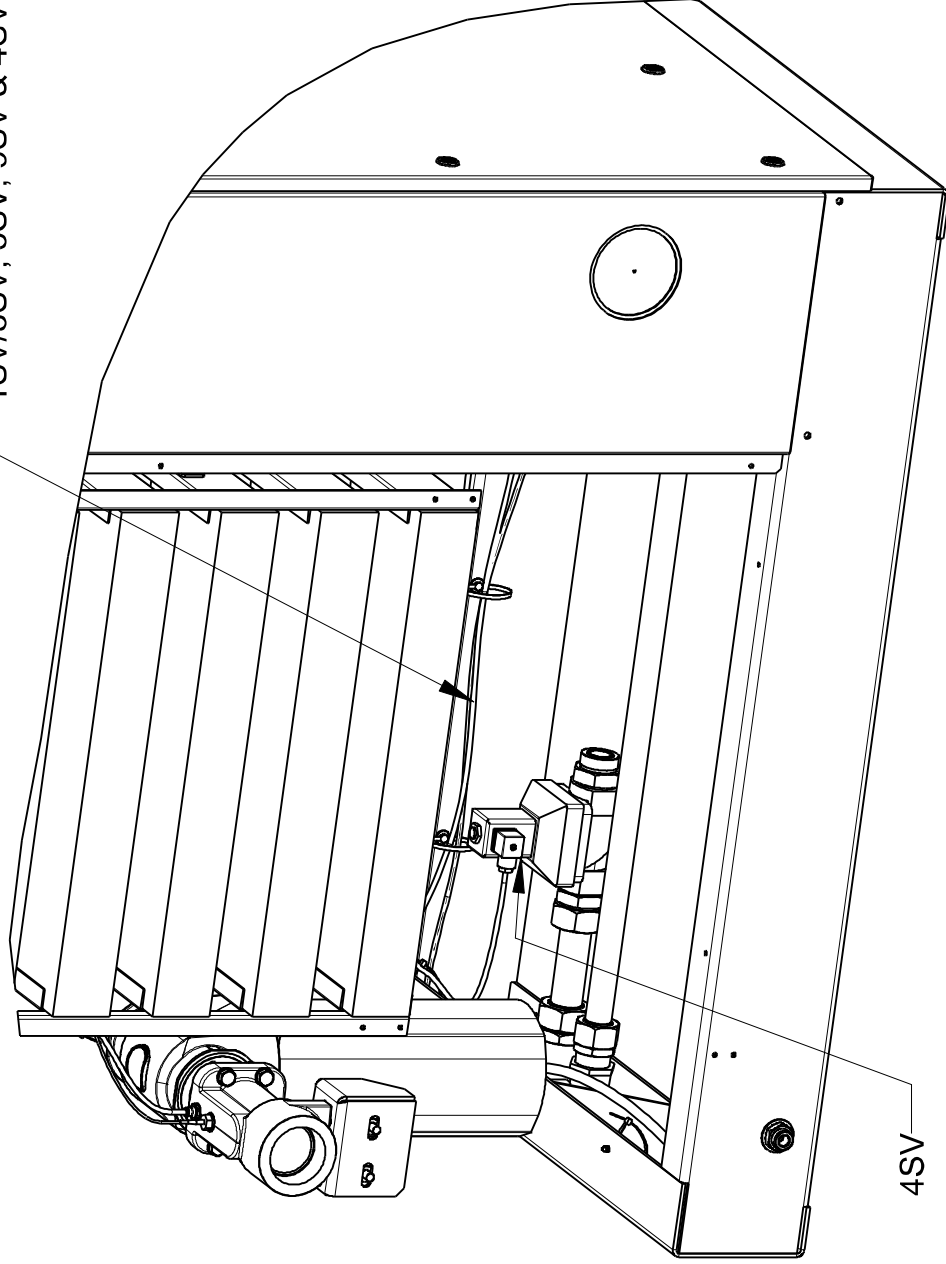
Title :

**ASSEMBLY INST., CONTROLS/
INLET VALVE**

REV **B**

Qty. Description
ROUTE WATER STOP VALVE CABLE TO STARTER BOX. (WATER COOLED ONLY) --(4SV)---

1SV/3SV, 5SV, 9SV & 4SV



4SV

BUNDLE WITH 1SV, 3SV/5SV, 9SV & 4SV



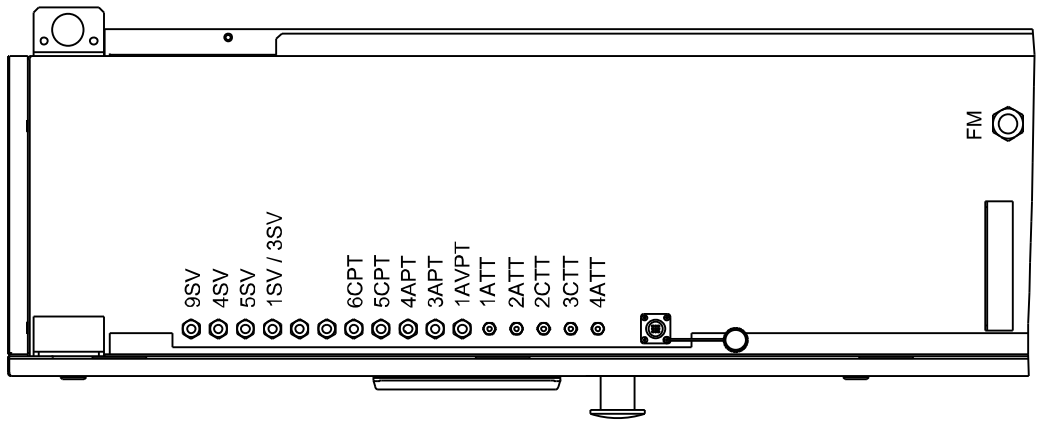
Part Number : **23469901**

REV **B**
**ASSEMBLY INST., CONTROLS/
 INLET VALVE**

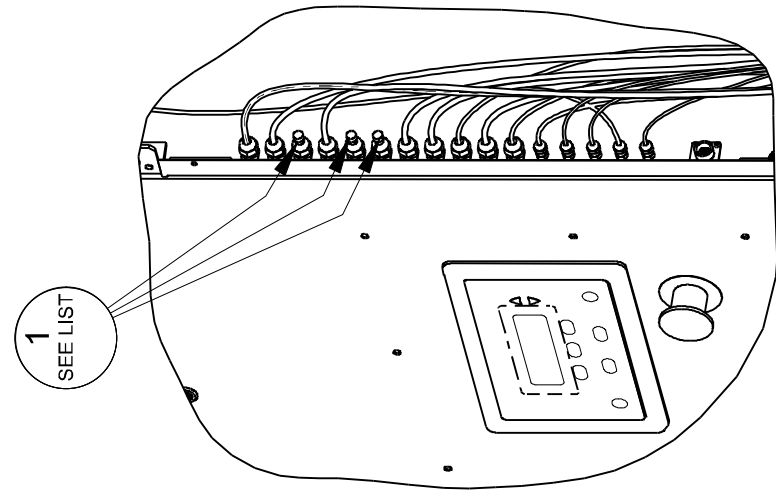
160

Title :

Item	Part No.	Description	Qty.	Description
				STARTER BOX CABLE LAYOUT.



CABLE	DESCRIPTION
9SV	CONDENSATE
4SV	WATER STOP VALVE
5SV	MODULATION (FS ONLY)
1SV / 3SV	LOAD / BLOWDOWN
6CPT	OIL FILTER OUT PRESSURE
5CPT	OIL FILTER IN PRESSURE
4APT	PACKAGE DISCHARGE PRESSURE
3APT	WET SUMP PRESSURE
1AVPT	INLET VACUUM PRESSURE
1ATT	AMBIENT AIR INLET TEMPERATURE
2ATT	AIREND DISCHARGE TEMPERATURE
2CTT	OIL INJECTION TEMPERATURE
3CTT	OIL OUT TEMPERATURE AT COOLER
4ATT	PACKAGE AIR DISCHARGE TEMPERATURE
FM	FAN MOTOR



ALTERNATE PARTS LIST			
ITEM	DESCRIPTION	WHERE USED	QTY
1	PLUG, SYNIFLEX TUBING	STD ON/OFF	6
		W/MODULATION	5
		AIR COOLED VSD	4
		WATER COOLED VSD	3



Ingersoll Rand
Industrial Technologies

Part Number : **23554926**

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REV

ASSEMBLY INST., FREEZE PROTECTION B

Item	Part No.	Description	Qty.
1	22315618	FUSE, 20A 600V	6
2	22315675	BLOCK, FUSE 30A, 600V, 3-POLE	2
3	23434368	DRIVE, FAN VF (FC51M3) 4KW	1
4	23538515	BREAKER, CIRCUIT 20A	1
5	SEE BOM	HEATERS	2
6	39108121	WIRE, 12 AWG BLACK	6000
7	39249834	WIRE, 12 AWG GREEN/YELLOW	2000
8	54691076	SCREW, M4 X 0.7 X 10 MM THREAD FORMING	7
9	54766928	THERMOSTAT, NORMALLY CLOSED	1
10	95986097	TERMINAL, RING TONGUE 16-14 WIRE - #10	24
11	96701370	NUT, HEX STYLE 1 COURSE THD M8-1.25	4
12	96741467	WASHER, SPRING LOCK, CURVED TYPE A, M8	4

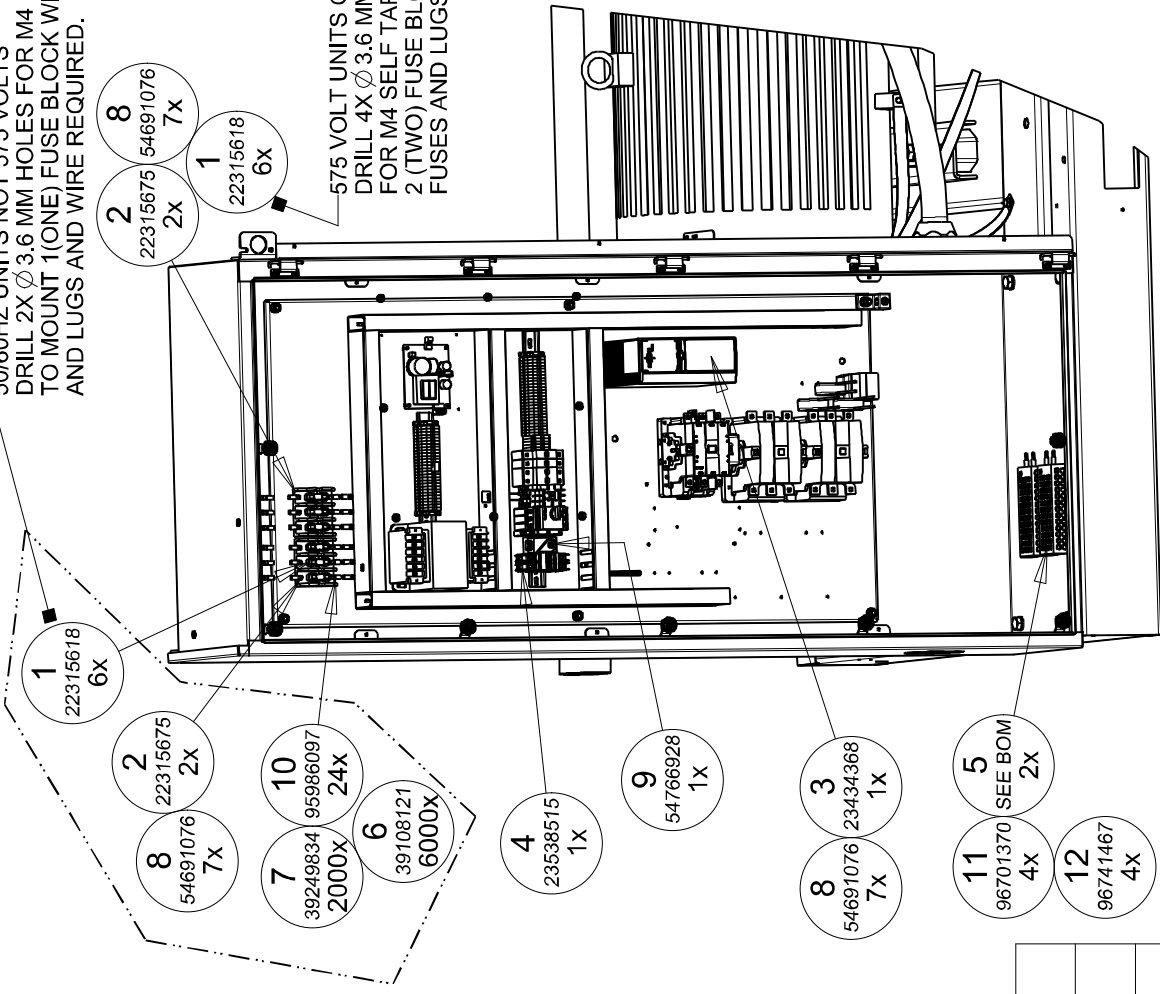
NOTE: ITEM 6, 7 AND 10 TO BE USED TO CONNECT TRANSFORMER AND FUSE BLOCKS TO DRIVE THRU HOLES CUT FOR CONDUIT IN STEP 6

Description

ASSEMBLE, COMPONENTS INSIDE STATER BOX

50/60HZ UNITS NOT 575 VOLTS
DRILL 2X Ø 3.6 MM HOLES FOR M4 SELF TAPPING SCREW
TO MOUNT 1(ONE) FUSE BLOCK WITH 3 (THREE) FUSES
AND LUGS AND WIRE REQUIRED.

575 VOLT UNITS ONLY
DRILL 4X Ø 3.6 MM HOLES
FOR M4 SELF TAPPING SCREW TO MOUNT
2 (TWO) FUSE BLOCKS WITH 6 (SIX)
FUSES AND LUGS AND WIRE REQUIRED.



NOTE: HEATERS MOUNTED TO STUDS IN
BOTTOM OF BOX

HEATERS

Item	Part No.	Description	Unit
5	23554801	HEATER, 250 WATTS 120 VOLTS	60 HZ
5	23560253	HEATER, 250 WATTS 240 VOLTS	50HZ



Part Number : **23554926**

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Title :

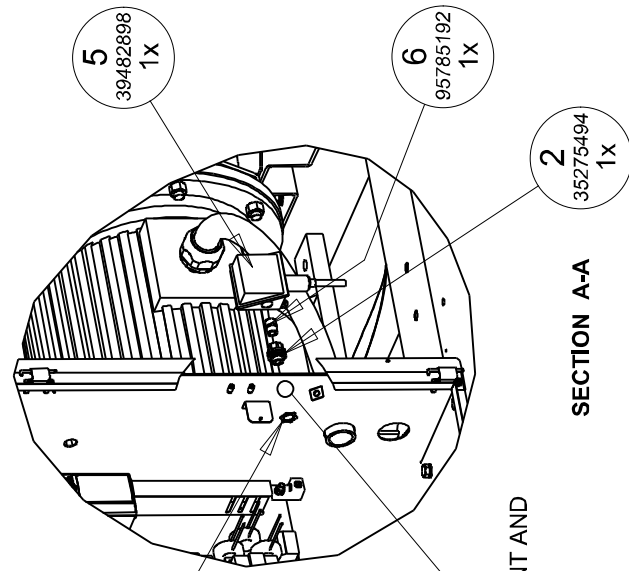
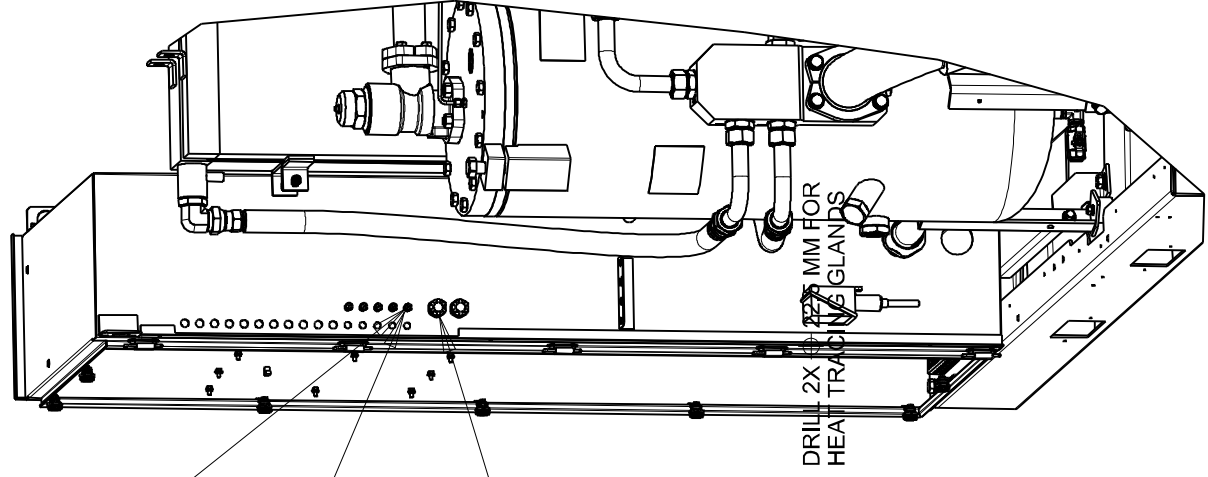
ASSEMBLY INST., FREEZE PROTECTION

REV

B

Item	Part No.	Description	Qty.	Description
1	23547763	GLAND, WIRE WITH LOCKING NUT	5	ASSEMBLE COMPONENTS TO BOX
2	35275494	HUB	1	
3	39108949	LOCKNUT, .50 INCH SEALING	3	
4	39180997	SEAL, .50 INCH HEAT TRACING CABLE	2	
5	39482898	THERMOSTAT, AMBIENT SENSING LOW AMBIENT	1	
6	95785192	NIPPLE, EXTRA STRONG .50 NPT X 1.13 LONG	1	

Description
ASSEMBLE COMPONENTS TO BOX



DRILL \varnothing 22 MM HOLE IN STARTER BOX APPROX 80 MM FROM FRONT AND 3500 MM FROM BOTTOM



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Part Number :

23554926

Title :

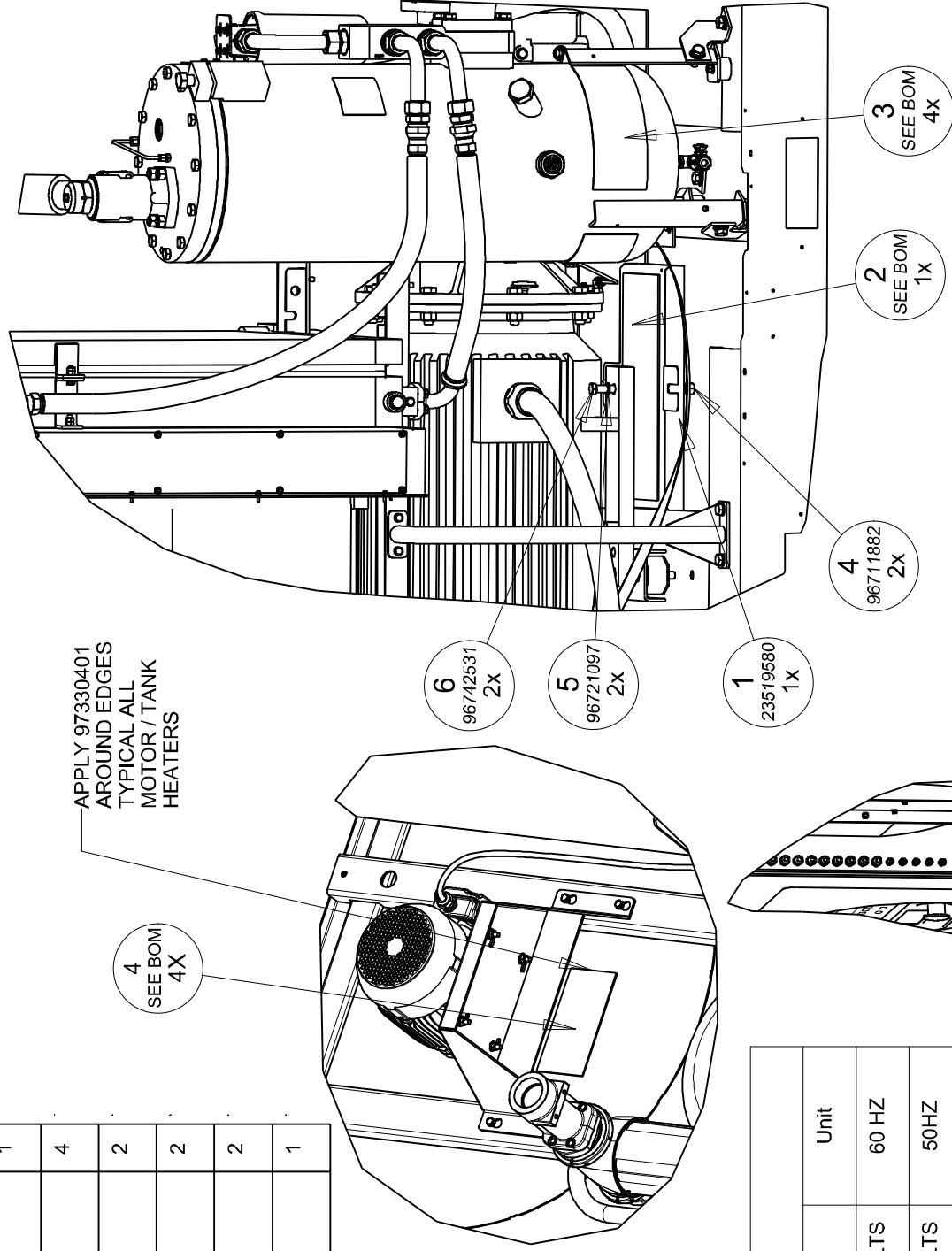
ASSEMBLY INST., FREEZE PROTECTION

REV

B

Item	Part No.	Description	Qty.
1	23519580	SUPPORT, LOW AMBIENT MOTOR HEATER	1
2	SEE BOM	HEATER DRIVE MOTOR	1
3	SEE BOM	HEATER FAN MOTOR & TANK	4
4	96711882	NUT, HEX STYLE 1 COURSE THD M16-2.00	2
5	96721097	WASHER, SPRING LOCK, CURVED TYPE A, M16	2
6	96742531	SCREW, HEX HEAD M16-2.00 X 60.0 LONG	2
7	97330401	SEALANT, HEAT RESISTANT	1

Description
HEATERS, MOTORS AND TANK



APPLY 97330401 AROUND EDGES AROUND ALL TYPICAL ALL MOTOR / TANK HEATERS

4
SEE BOM
4X

6
96742531
2X

5
96721097
2X

1
23519580
1X

4
96711882
2X

3
SEE BOM
4X

2
SEE BOM
1X

HEATERS			
Item	Part No.	Description	Unit
2	23538150	HEATER, 1000 WATTS 120 VOLTS	60 HZ
2	23538168	HEATER, 1000 WATTS 240 VOLTS	50HZ
3	23538176	HEATER, 250 WATTS 120 VOLTS	60 HZ
3	23538184	HEATER, 250 WATTS 240 VOLTS	50HZ

ROUTE HEATER CABLES THRU THESE 5 GLANDS SHOWN ON PREVIOUS SHEET



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Part Number :

23554926

Title :

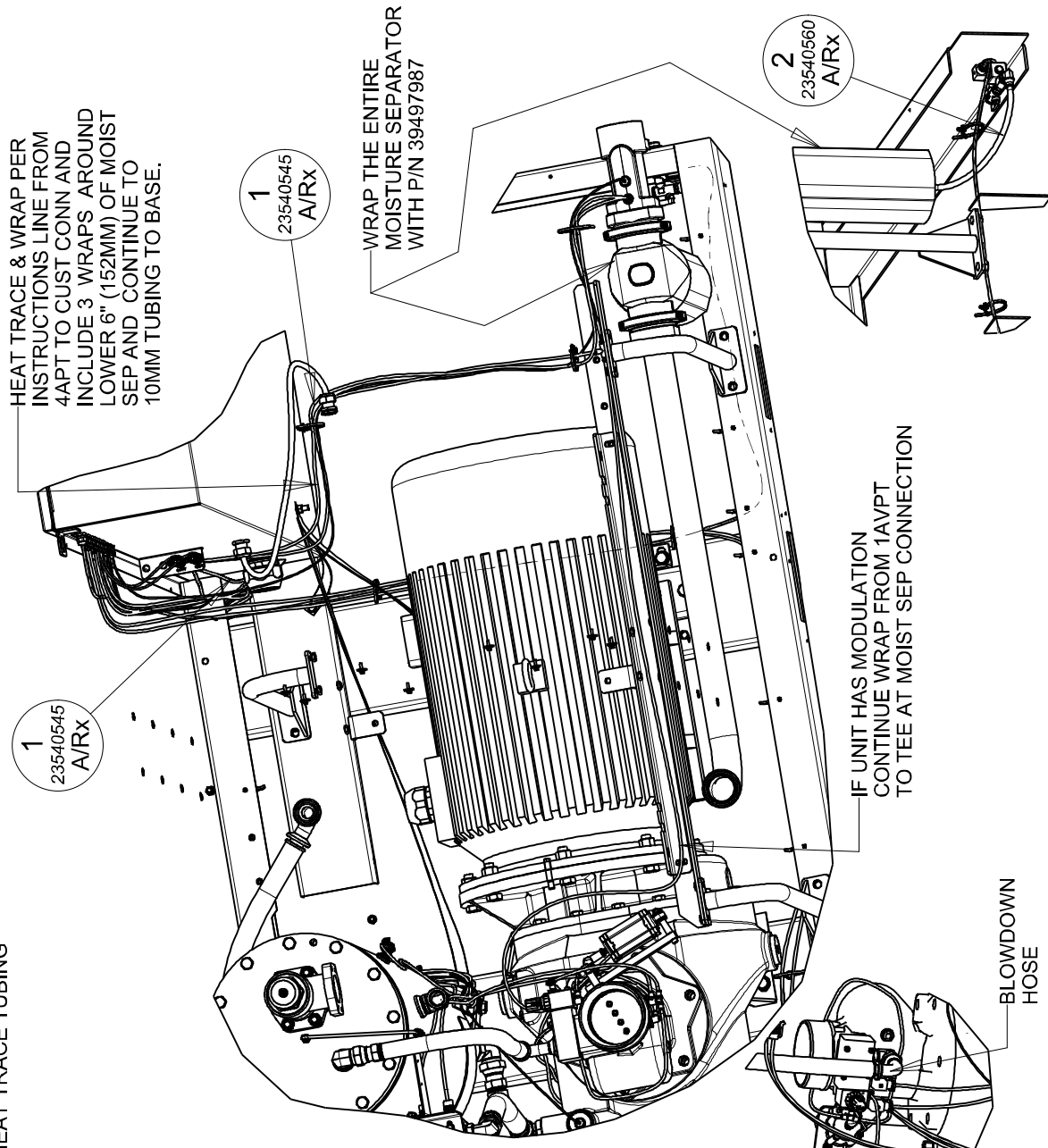
ASSEMBLY INST., FREEZE PROTECTION

REV

B

Item	Part No.	Description	Qty.
1	23540545	TUBING, 6 MM FLUOROPOLYMER	5500
2	23540560	TUBING, 12 MMFLUOROPOLYMER	350
3	35268788	CABLE TIE	20
4	SEE BOM	HEAT TRACING, 5 WATTS/FOOT	8382
5	39181037	INSULATION, 5/8" IDX1/2" THK. PIPE	5
6	39197546	TAPE, ALUMINUM FOIL	1
7	39205059	END SEAL CAP HLT HEAT TRACING CABLE	2
8	39497987	INSULATION, SHEET 36" X 48" X 0.50" THK	1

Description
HEAT TRACE TUBING



HEAT TRACE AND WRAP PER INTRUCTIONS LINE FROM 1AVPT TO INLET VALVE TO INCLUDE METAL ELBOW OF BLOWDOWN HOSE AT INLET VALVE AND ALL TUBING ON INLET VALVE.

HEATERS

Item	Part No.	Description
4	39181011	120 VOLTS - 60 HZ
4	39237078	240 VOLTS - 50 HZ

WRAPPING INSTRUCTIONS:
WRAP 5 WATT CABLE, 39187037, 39197546 AND BOUND BY 35268788 AS REQUIRED



Ingersoll Rand
Industrial Technologies

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Part Number :

23554926

Title :

ASSEMBLY INST., FREEZE PROTECTION

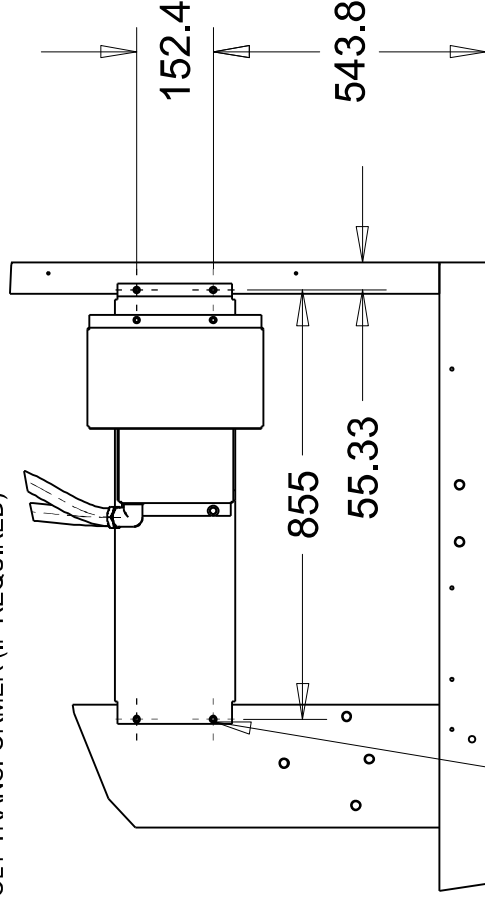
REV

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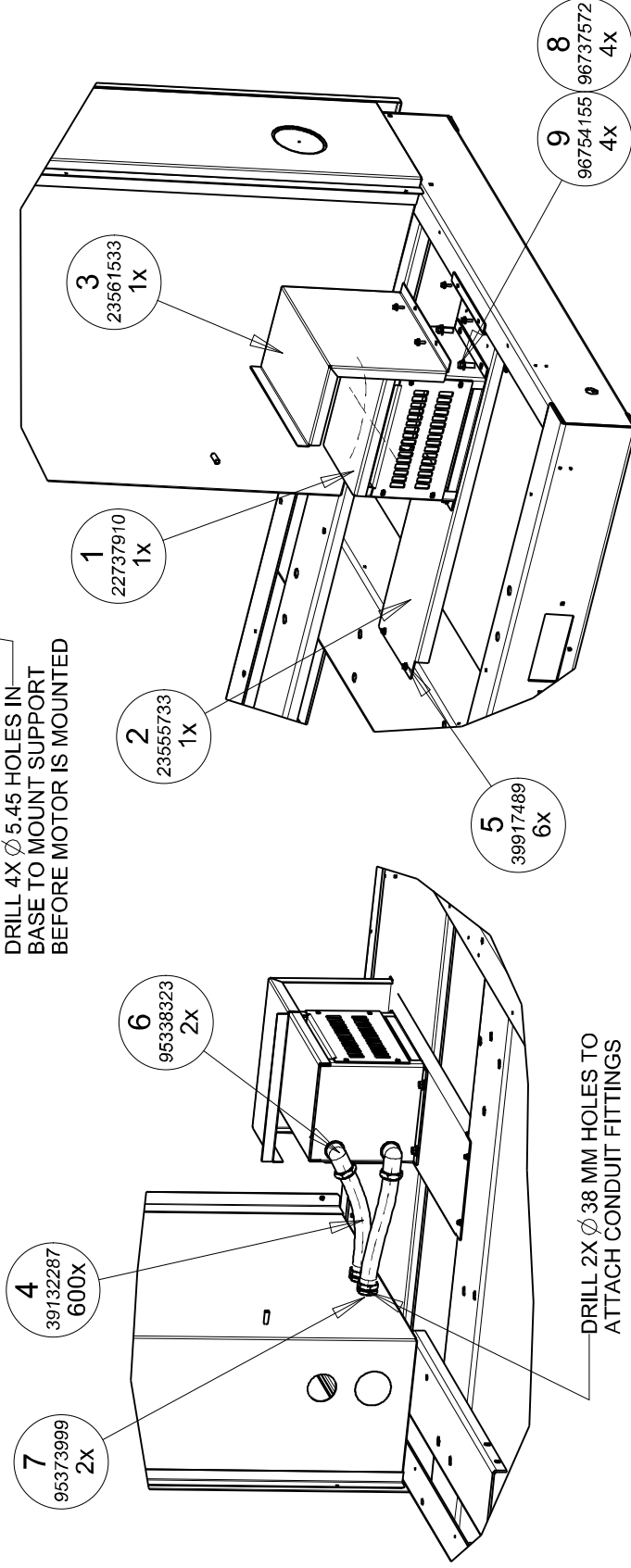
Item	Part No.	Description	Qty.
1	22737910	TRANSFORMER, 15 KVA 575V/3PH/60HZ	1
2	23555733	SUPPORT, TRANSFORMER 575 VOLT	1
3	23561533	SHIELD, 575 V TRANSFORMER LOW AMBIENT	1
4	39132287	CONDUIT, 1.0 SEALTITE	600
5	39917489	SCREW, HEX HEAD FLANGE M6 X 16.0 LONG	6
6	95338323	ELBOW, INSULATED THROAT 1.00 NPT X 1.00 CONDUIT	2
7	95373999	CONNECTOR, INSULATED THROAT 1.00 NPT X 1.00 CONDUIT	2
8	96737572	NUT, HEX FLANGE LOCK SERRATED M10-1.50	4
9	96754155	SCREW, HEX HEAD FLANGE M10 X 25.0 LONG	4

Description

ASSEMBLE 575 VOLT TRANSFORMER (IF REQUIRED)



DRILL 4X Ø 5.45 HOLES IN
BASE TO MOUNT SUPPORT
BEFORE MOTOR IS MOUNTED



SERVICE

MAINTENANCE KITS

PART NO.	DESCRIPTION
23565278	KIT, FIXED SPEED FILTERS (AIR & OIL)
23565286	KIT, VSD FILTERS (AIR & OIL)
23565294	KIT, FIXED SPEED MAINTENANCE (6MO/4K)
23565328	KIT, FIXED SPEED MAINTENANCE (1YR/8K)
23565385	KIT, FIXED SPEED MAINTENANCE (16K)
23565310	KIT, VSD MAINTENANCE (6MO/4K)
23565369	KIT, VSD MAINTENANCE (1YR/8K)
23565419	KIT, VSD MAINTENANCE (16K)
23565302	KIT, FS HIGH DUST AIR FILTER MAINTENANCE (6MO/4K)
23565344	KIT, FS HI DUST AIR FILTER MAINTENANCE (1YR/8K)
23565401	KIT, FS HIGH DUST AIR FILTER MAINTENANCE (16K)
23569312	KIT, FS HI DUST AIR & PRE-FILTER MAINTENANCE (6MO/4K)
23569320	KIT, MAINT HI DUST AIR & PRE-FLTR (1YR/8K) FS
23569338	KIT, FS HI DUST AIR AND PRE-FILTER MAINTENANCE (16K)
23565245	KIT, START UP (FOOD GRADE)
23565252	KIT, FIXED SPEED FOOD GRADE (3MO/2K)
23565336	KIT, FIXED SPEED FOOD GRADE MAINTENANCE (1YR/8K)
23565393	KIT, FS FOOD GRADE MAINTENANCE (16K)
23565260	KIT, VSD FOOD GRADE (3MO/2K)
23565377	KIT, VSD FOOD GRADE MAINTENANCE (1YR/8K)
23565427	KIT, VSD FOOD GRADE MAINTENANCE (16K)

FIELD KITS (RETROFIT KITS)

PART NO.	DESCRIPTION
23562176	KIT, MODULATION FIELD INLET VALVE HPKG 120
23565450	KIT, AIR FILTER HIGH DUST FIELD
23565468	KIT, PACKAGE FILTER HIGH DUST FIELD (STANDARD & ODM)
23565476	KIT, FOOD GRADE LUBRICANT W/ EXTEND FILTER FIELD
23548217	KIT, ERS FIELD
23565484	KIT, PORO FIELD

SERVICE PARTS

PART NO.	DESCRIPTION
23545841	ELEMENT, SEPARATOR TANK 18 INCH
23424922	REPLACEMENT FILTER ELEMENT (OIL)
23497001	PAD, PRE-FILTER (10 X 675 X 1315) (STD & ODM)
23512866	FILTER, PANEL AIR (HIGH DUST)
23429822	REPLACEMENT ELEMENT IR PART NO. 23429822 (STANDARD)
23388275	REPLACEMENT ELEMENT IR PART NO. 23388275 (HIGH DUST)
23564446	REPLACEMENT STARTER BOX FILTER ELEMENTS

SERVICE KITS

PART NO.	DESCRIPTION
23531569	KIT, SERVICE VALVE, HS THERMAL 102MM-M42 180°F-198°F
23533243	KIT, SERVICE VALVE, HS THERMAL 102MM-M42 195°F-212°F
23531577	KIT, SERVICE VALVE, MPC-H42X-16L DN65 SAE FLANGES 2.5 OUT 3.0 IN
23531585	KIT, SERVICE HPKG 120 VALVE (FIXED SPEED)
23531601	KIT, SERVICE HK 120 VALVE (VARIABLE SPEED)
23467244	KIT, SERVICE SOLENOID VALVE FOR VVF18ENO, PVPF18ENO
23467251	KIT, SERVICE CYLINDER HPKG 110 / 120 / 140
23531627	KIT, SERVICE BLOWDOWN BLOCK VVF18ENO
23531635	KIT, SERVICE MODULATION BLOCK PVPF18ENO
23473069	KIT, SERVICE VALVE, NO-LOSS DRAIN B.I. BEKOMAT ENL 5 VARIO - BSPP
23570344	KIT, SERVICE INLET VALVE FS ON/OFF
23570369	KIT, SERVICE INLET VALVE FS MODULATION
23569197	KIT, SERVICE (AIR COOLED HOSE)
23569205	KIT, SERVICE (WATER COOLED HOSE)
23569213	KIT, SERVICE (AIR COOLED HOSE - ERS)

VSD DRIVE PARTS

To be installed by authorized Ingersoll Rand service personnel only.

PART NO.	DESCRIPTION
23582216	DRIVE, 110KW COMPLETE SHIPPABLE DRIVE
23582224	DRIVE, 90KW COMPLETE SHIPPABLE DRIVE
23527252	BOARD, 110KW ID BOARD
22235030	BOARD, POWER (INTERFACE) BOARD
23529639	MODULE, INPUT RECTIFIER MODULE
23529696	MODULE, OUTPUT IGBT MODULE
23581762	MODULE, PROTECTION MODULE
23485535	BOARD, CONTROL BOARD (FIRMWARE V2.40)
22235048	BOARD, DC BUS SENSING BOARD
22235055	BOARD, DISTRIBUTION BOARD
23529746	BOARD, EMC BOARD
22235030	BOARD, POWER (INTERFACE) BOARD
23581739	CABLE, MAIN CONTROL CABLE
23581747	CAPACITOR, STARTING CAPACITOR FOR COOLING FAN
22076087	FUSE
23529738	KIT, COOLING FAN (KIT)
23581754	PROBE, RECTIFIER THERMAL PROBE