



Carrier Transicold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT

PART NO.	MODEL DESCRIPTION
98-03221-00	ELECTRIC & WATER HEAT

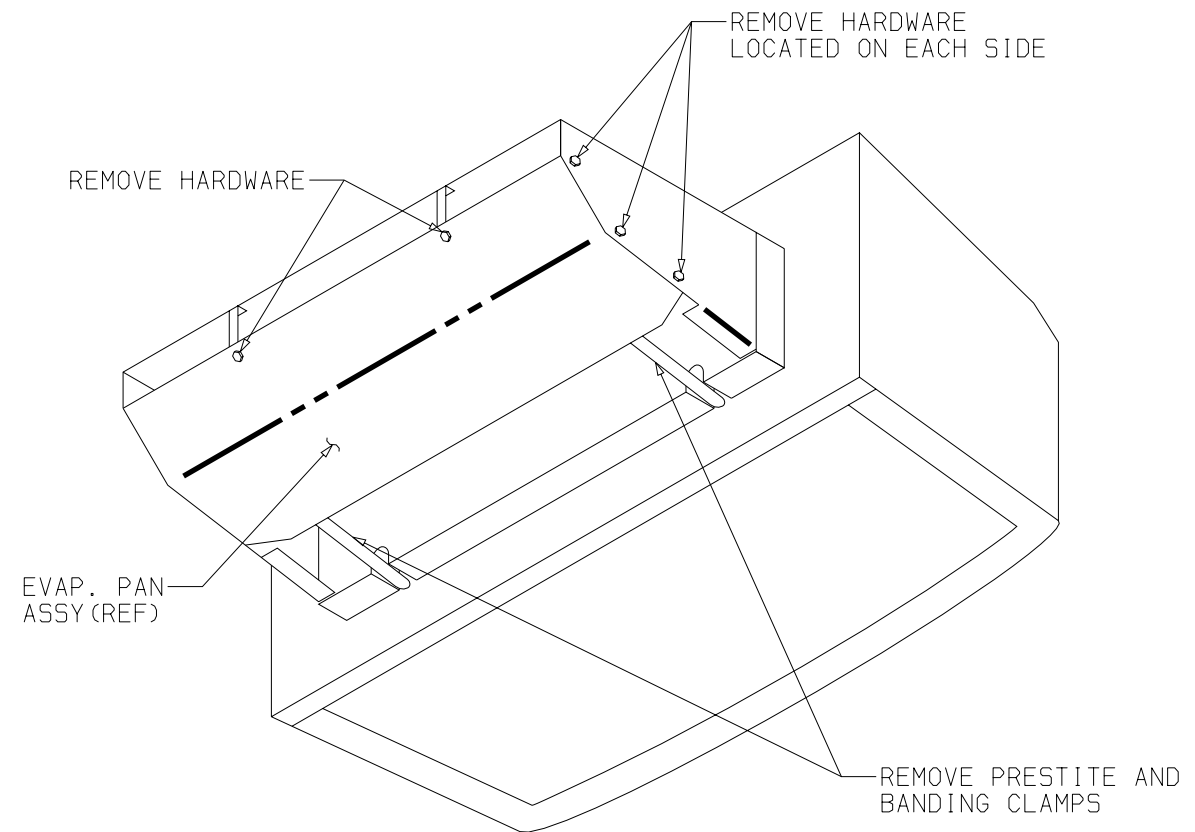
SHEET INDEX		
DESCRIPTION	SHEET NO.	REVISION
DRAIN PAN REMOVAL	1	C
HEATER MOUNTING	2	-
JUNCTION BOX WIRING	3	B
HEATER BOX INSTALLATION	4	-
HTR BOX/MAIN CONTROL BOX WIRING	5	-
ENGINE WATER UNIT PREPERATION	6	-
WATER VALVE ASSEMBLY/INSTALL.	7	B
WATER HEAT INSTALL.(ENGINE)	8	C
FINAL WATER HEAT INSTALL.	9	C

ELECTRIC & WATER HEAT INSTALLATION PROCEDURE

CAUTION: TURN THE UNIT OFF, DISCONNECT THE BATTERY & ALLOW SUFFICIENT TIME FOR THE ENGINE & ITS FLUIDS TO COOL BEFORE PROCEEDING.

NOTE: IT IS EXTREMELY IMPORTANT THAT THE UNIT REMAIN DISABLED THROUGHOUT THIS PROCEDURE.

ASSEMBLY NOTE: APPLY THREAD SEALANT DURING ASSEMBLY AS REQUIRED TO ALL FITTINGS.



- 1.) REMOVE EVAPORATOR DRAIN PAN ASSEMBLY FROM UNIT (RETAIN HARDWARE FOR RE-ASSEMBLY).
ONCE THE DRAIN PAN HAS BEEN REMOVED, REMOVE THE EXISTING PRESTITE (IF PRESENT)
FROM THE DRIP PAN OF THE EVAPORATOR.

(CONTINUED ON NEXT SHEET)

SEE SEPARATE PARTS LIST

C	UPDATED SHT. INDEX; SEE SHT'S 8 & 9 PER PCA71N213GP04					MGC	4 NOV 2004
B	UPDATED SHT. INDEX; SEE SHT's 3 & 7 PER IPCA71N200GP03/25					MGC	4/10/03
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE

SUPERSEDES	TITLE	INSTALLATION INSTRUCTIONS SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT	DRAWING NO. 98-03221 SHT. 1 OF	REV C
------------	-------	---	--------------------------------------	----------



THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT



- 2.) ASSEMBLE THE WATER COIL(IT.5), HEATER BRACKET ASSY'S(IT.115) AND HEATERS (IT.40) WITH HARDWARE SHOWN. NOTE: THE SMALLER WASHERS(IT.60) SHOULD BE USED TO MOUNT THE HEATERS AND COIL.
- 3.) INSTALL THE ASSEMBLY INTO THE EVAPORATOR WRAPPER MAKING SURE THAT THE MOUNTING HOLES ALLIGN CORRECTLY.
- 4.) INSTALL AND TIGHTEN HARDWARE SECURING THE ASSEMBLY TO THE HOUSING.

- 5.) MOUNT THE SUPPLY AIR SENSOR(SAS(IT.23)) AND THE HIGH TEMPERATURE SAFETY(HTS(IT.20)) TO THE EVAPORATOR WRAPPER AS SHOWN IN "FIGURE A".
- 6.) REMOVE THE JUNCTION BOX(IT.120) COVER & LOCATE THE BOX INSIDE THE BULKHEAD AS SHOWN IN "FIGURE B".
- 7.) MARK THE POSITION OF THE MOUNTING HOLES. USING A #8(0.199 DIA) DRILL BIT, DRILL THE TWO HOLES FOR THE BOX & THE ONE HOLE FOR THE CLAMP.
- 8.) MOUNT THE JUNCTION BOX & CLAMP(SEE "FIGURE A").

(CONTINUED ON NEXT SHEET)

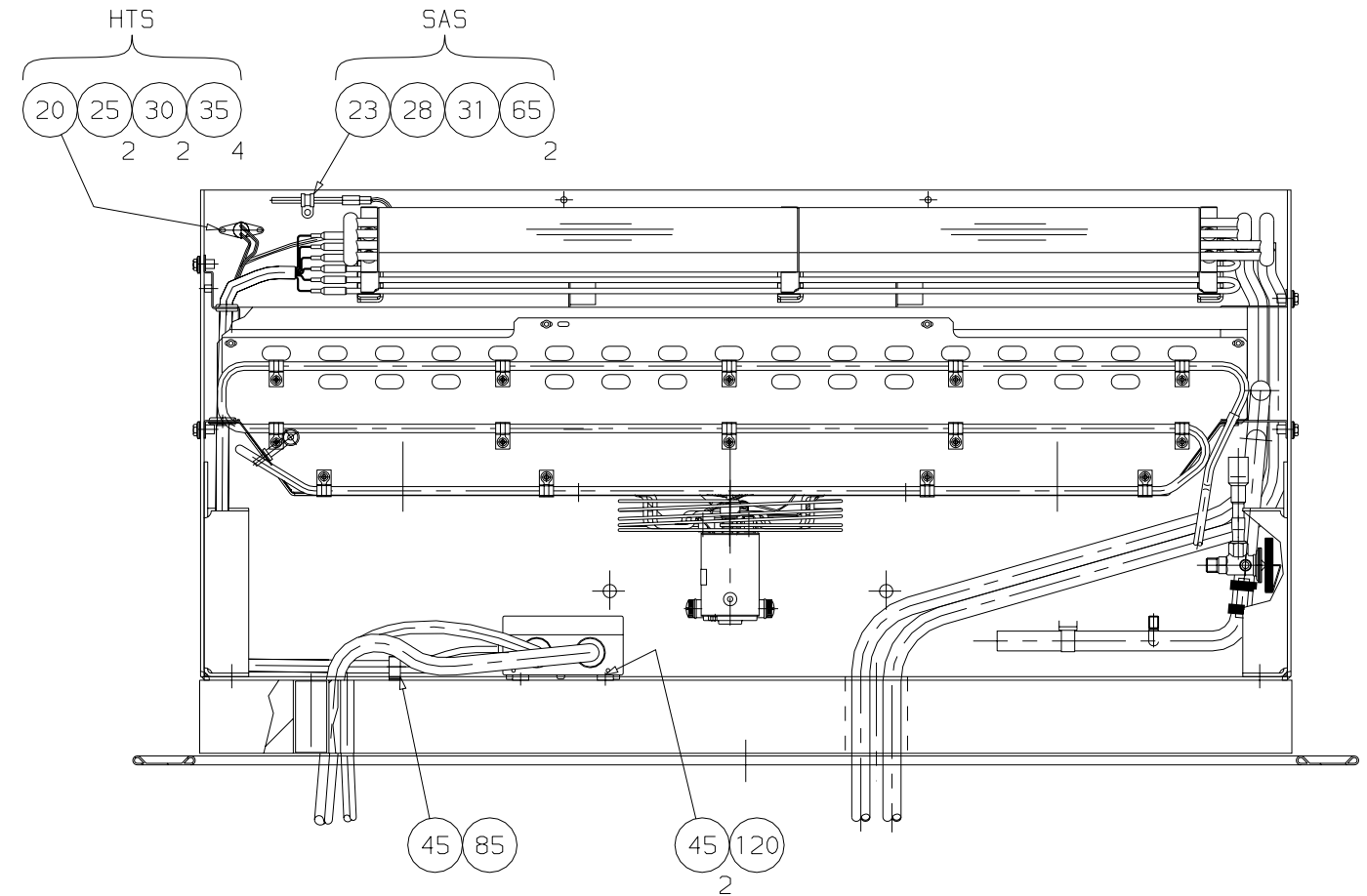


FIGURE A

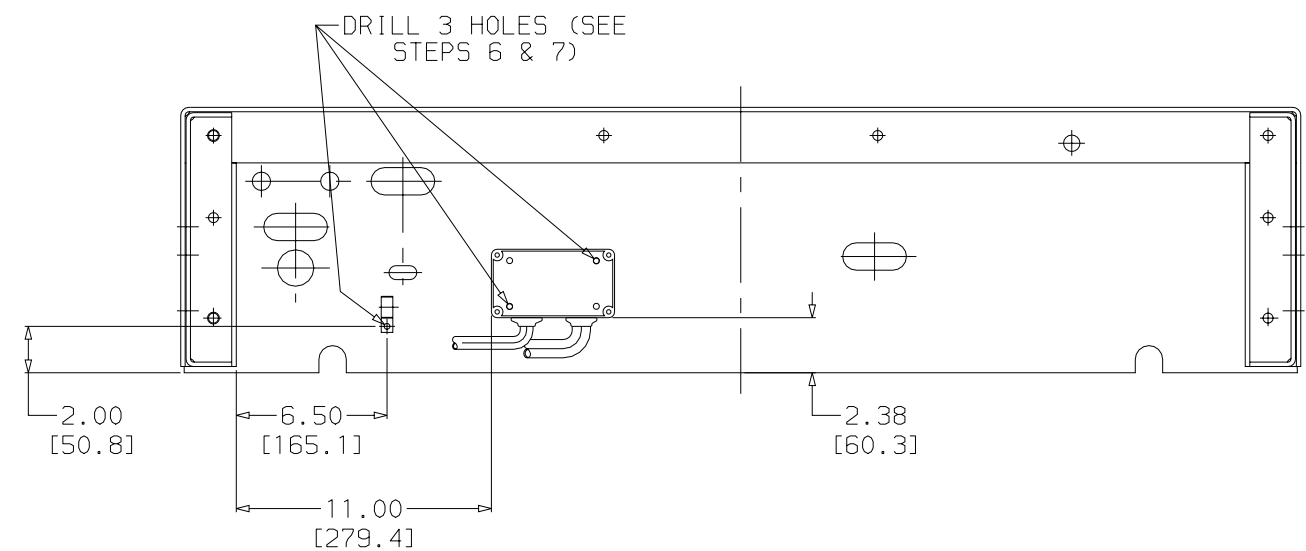


FIGURE B

								FIGURE B								
-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01	SUPERSEDES	TITLE				INSTALLATION INSTRUCTIONS	DRAWING NO.	98-03221	REV
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE		SUPRA 6/722/44 - ELECTRIC & WATER HEAT KIT					SHT. 2 OF	-	

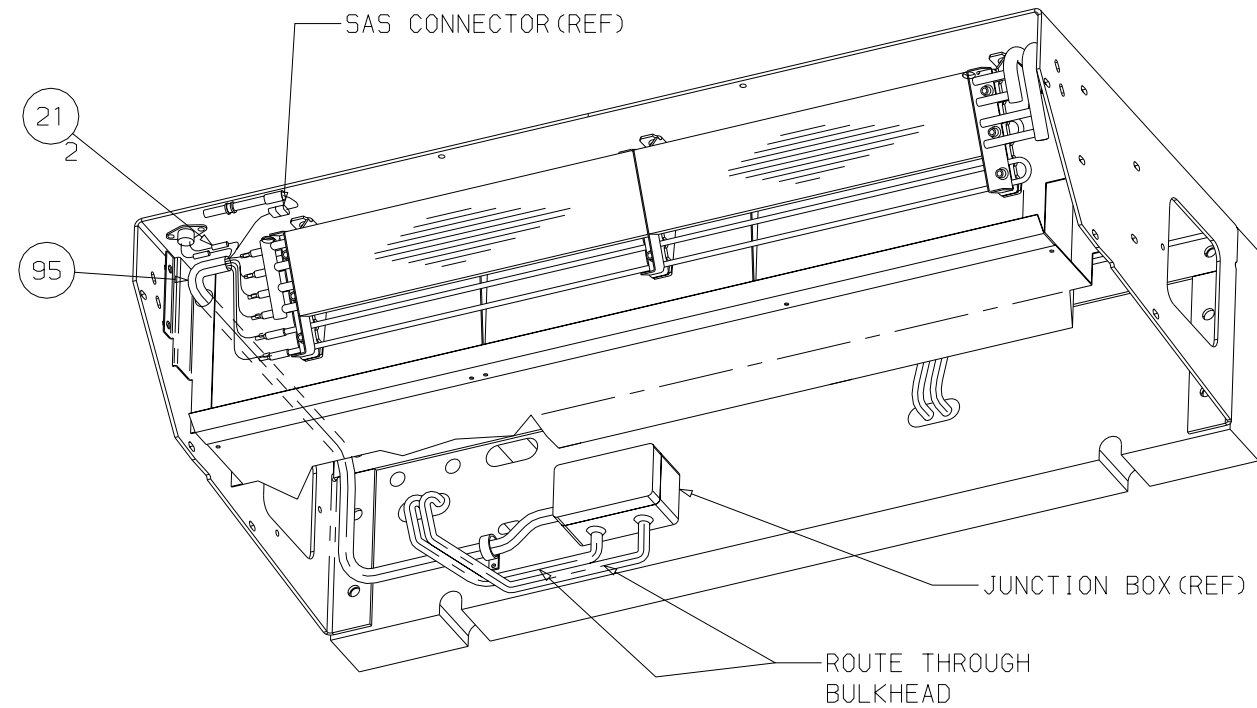


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

Carrier Transcold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

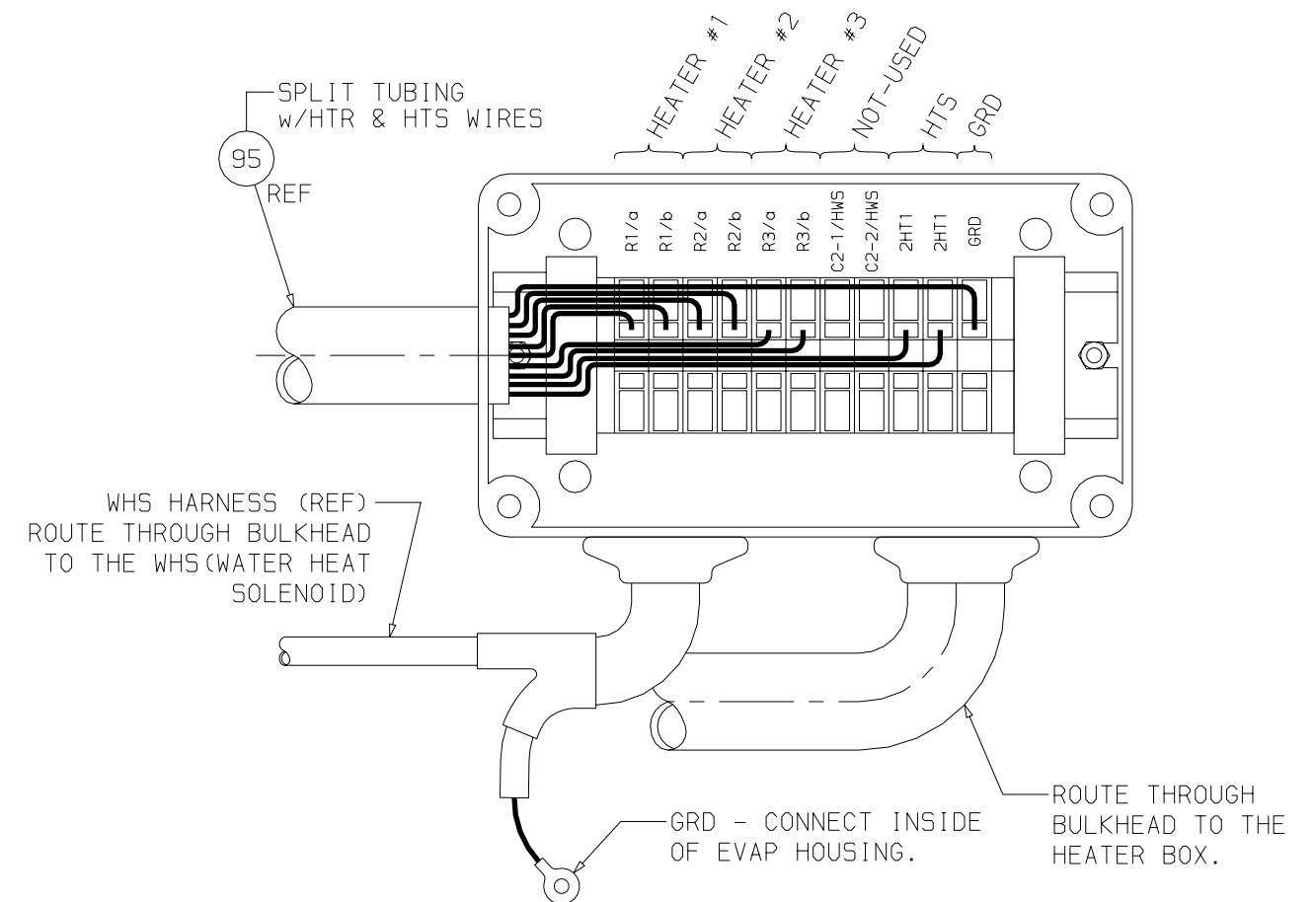
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT



- 9.) USE THE WIRE ASSEMBLY SUPPLIED(MARKED 2HT1) TO CONNECT THE HTS. USE BUTT SPLICES(IT.21) TO MAKE THE CONNECTIONS.
- 10.) PLUG THE SAS INTO THE EXISTING HARNESS CONNECTOR.
- 11.) SEPARATE THE HEATER WIRES INTO PAIRS OF EACH HEATER ROD. TAPE EACH PAIR TOGETHER.
- 12.) ROUTE THE HEATER WIRES ALONG WITH THE HTS WIRES THROUGH THE SPLIT TUBING (IT.95) AND THROUGH THE COIL AS SHOWN. ROUTE THE WIRES TO THE "JUNCTION BOX".
- 13.) REMOVE THE FLAG TERMINALS LOCATED ON THE HTS(2HT1) WIRES.
- 14.) TRIM ALL WIRES TO THE APPROPRIATE LENGTHS TO MAKE CONNECTIONS INSIDE OF THE JUNCTION BOX. TRIM 1/4" OFF OF EACH WIRE & MAKE CONNECTIONS AS SHOWN IN THE "JUNCTION BOX DIAGRAM".
- 15.) ROUTE THE HARNESS SHOWN THROUGH THE EVAPORATOR BULKHEAD. ADD CAULKING AROUND THE OPENING TO PREVENT AIR LEAKS.
- 16.) ADD TY-WRAPS(IT.75) AS REQUIRED TO SUPPORT LOOSE HARNESESSES.
- 17.) REINSTALL DRAIN-PAN USING PREVIOUSLY REMOVED HARDWARE, NEW PRESTITE(IT.8), & NEW BANDING CLAMPS(IT.9).

(CONTINUED ON NEXT SHEET)



JUNCTION BOX DIAGRAM

B	IN "JUNCTION BOX DIAGRAM": PIC'T UPDATED THE WHS HARNESS PER IPCA71N2006P03/25					MGC	4/15/03
-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE

SUPSEDES

TITLE

INSTALLATION INSTRUCTIONS
SUPRA 6/722/44 - ELECTRIC & WATER HEAT KIT

DRAWING NO.
98-03221
SHT. 3 OF

REV
B

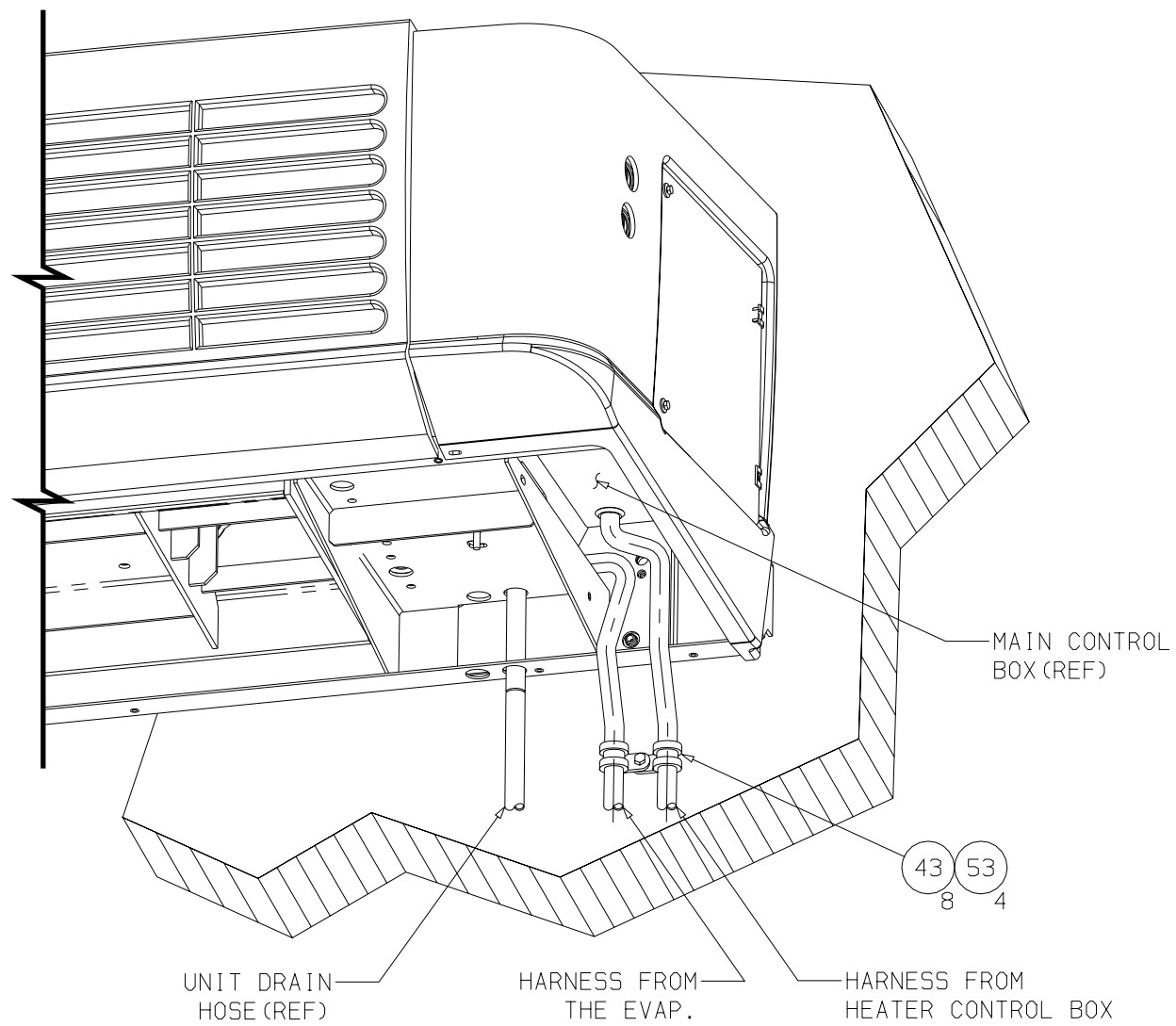


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

Carrier Transicold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT

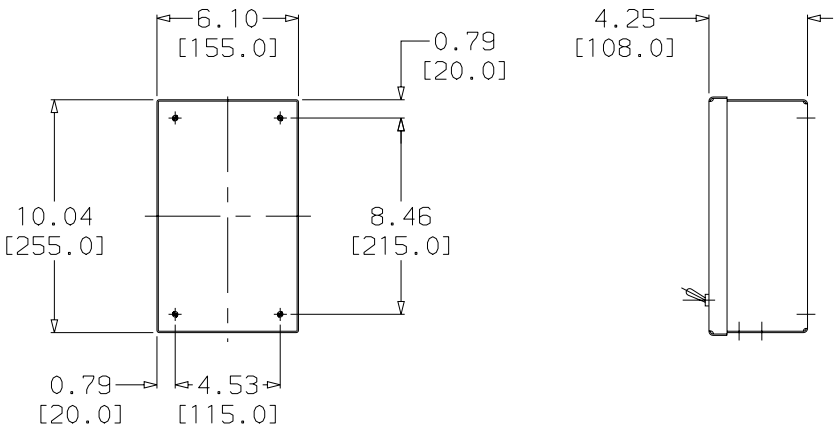
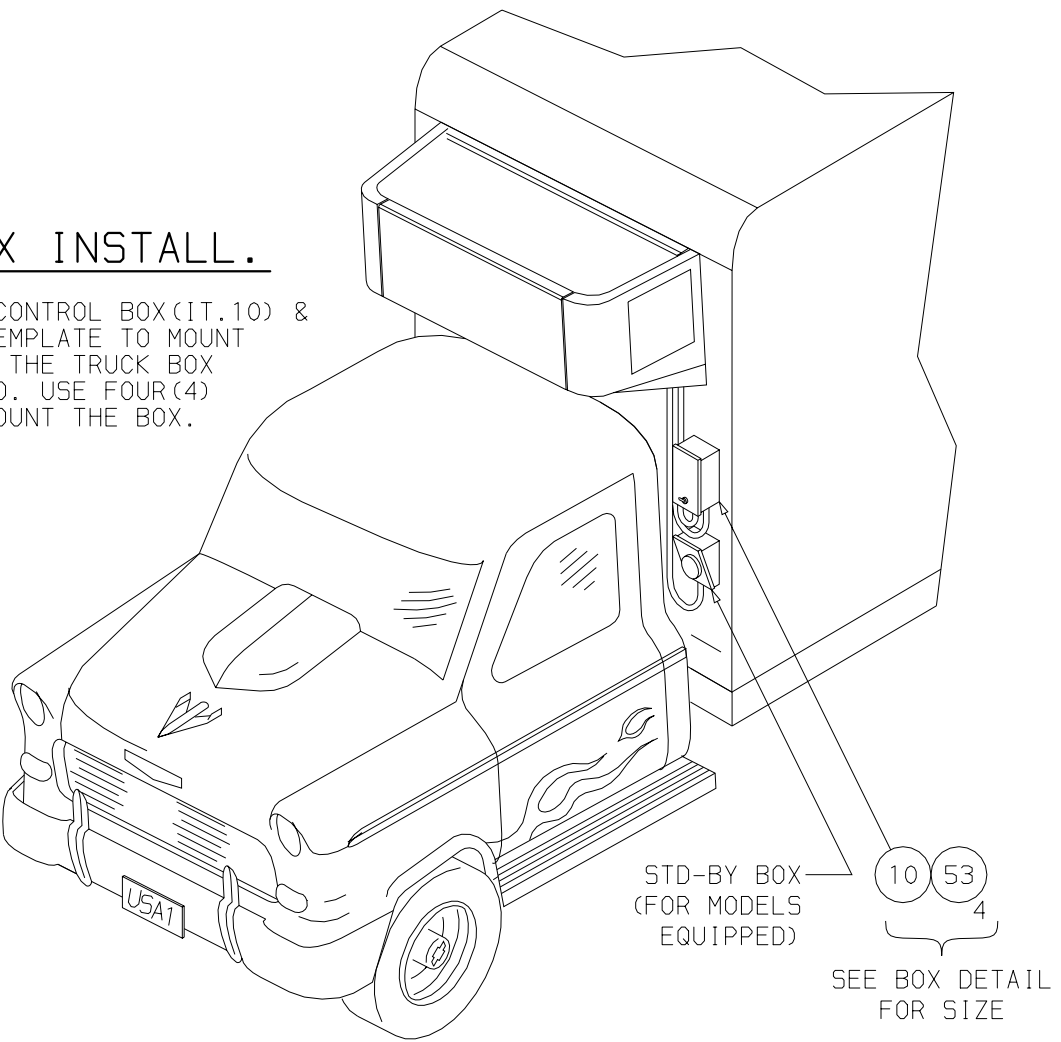


- 18.) ROUTE THE WIRES THROUGH THE BOTTOM OF THE UNIT DOWN THE FRONT OF THE TRUCK BODY.
- 19.) REFER TO "HEATER BOX INSTALL." FOR MOUNTING THE "HEATER CONTROL BOX(IT.10)".
- 20.) ROUTE THE HARNESS FROM THE EVAPORATOR JUNCTION BOX TO THE "HEATER CONTROL BOX". ROUTE THE HEATER CONTROL BOX HARNESS TO THE "MAIN CONTROL BOX".
- 21.) SECURE THE HARNESSES TO THE TRUCK WALL WITH CLAMPS(IT.43) & HARDWARE(IT.53).

(CONTINUED ON NEXT SHEET)

HEATER BOX INSTALL.

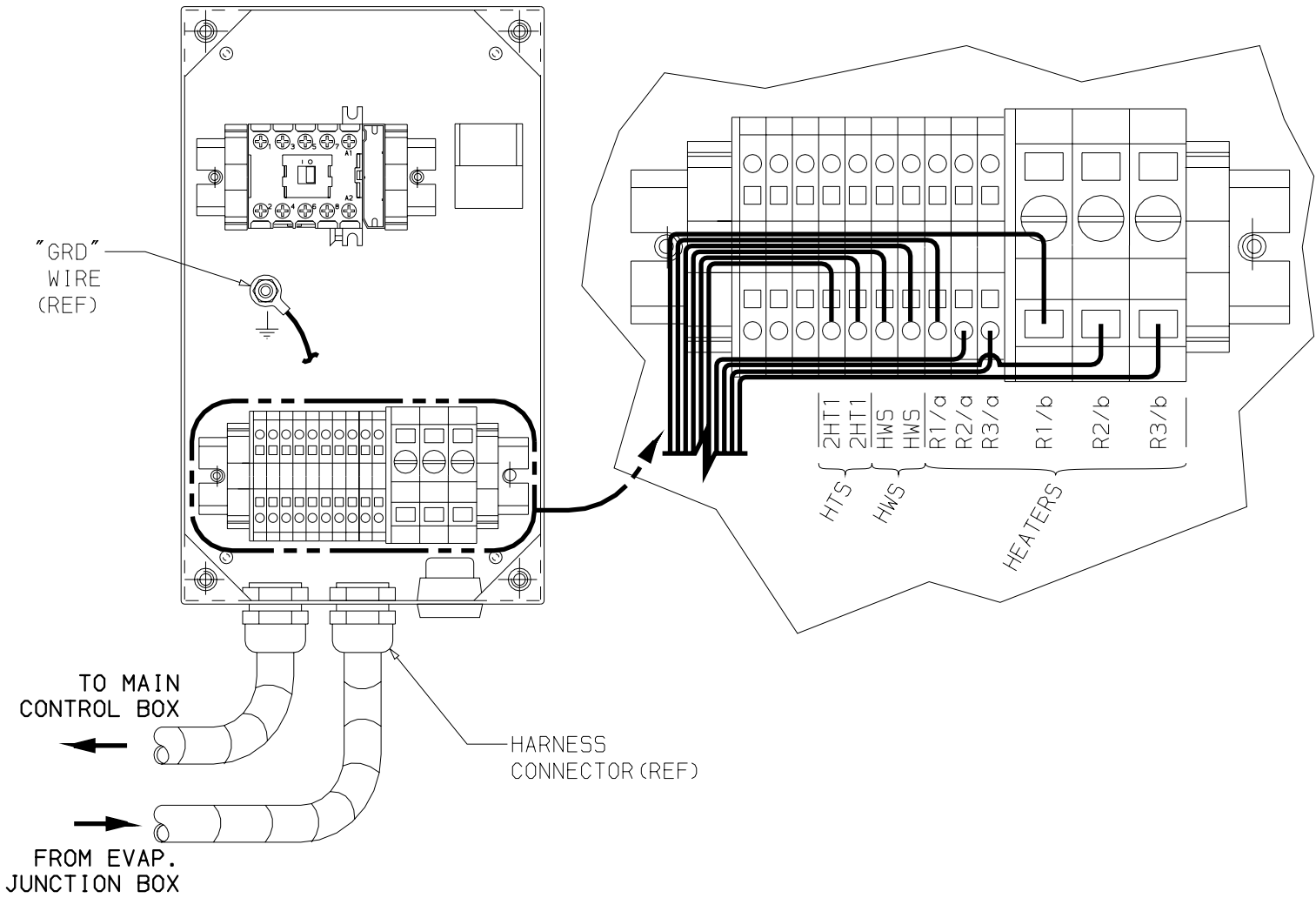
REMOVE THE LID OF CONTROL BOX(IT.10) & USE THE BOX AS A TEMPLATE TO MOUNT THE CONTROL BOX TO THE TRUCK BOX IN LOCATION DESIRED. USE FOUR(4) SCREWS(IT.53) TO MOUNT THE BOX.



SHOWN w/o DOOR

BOX DETAIL

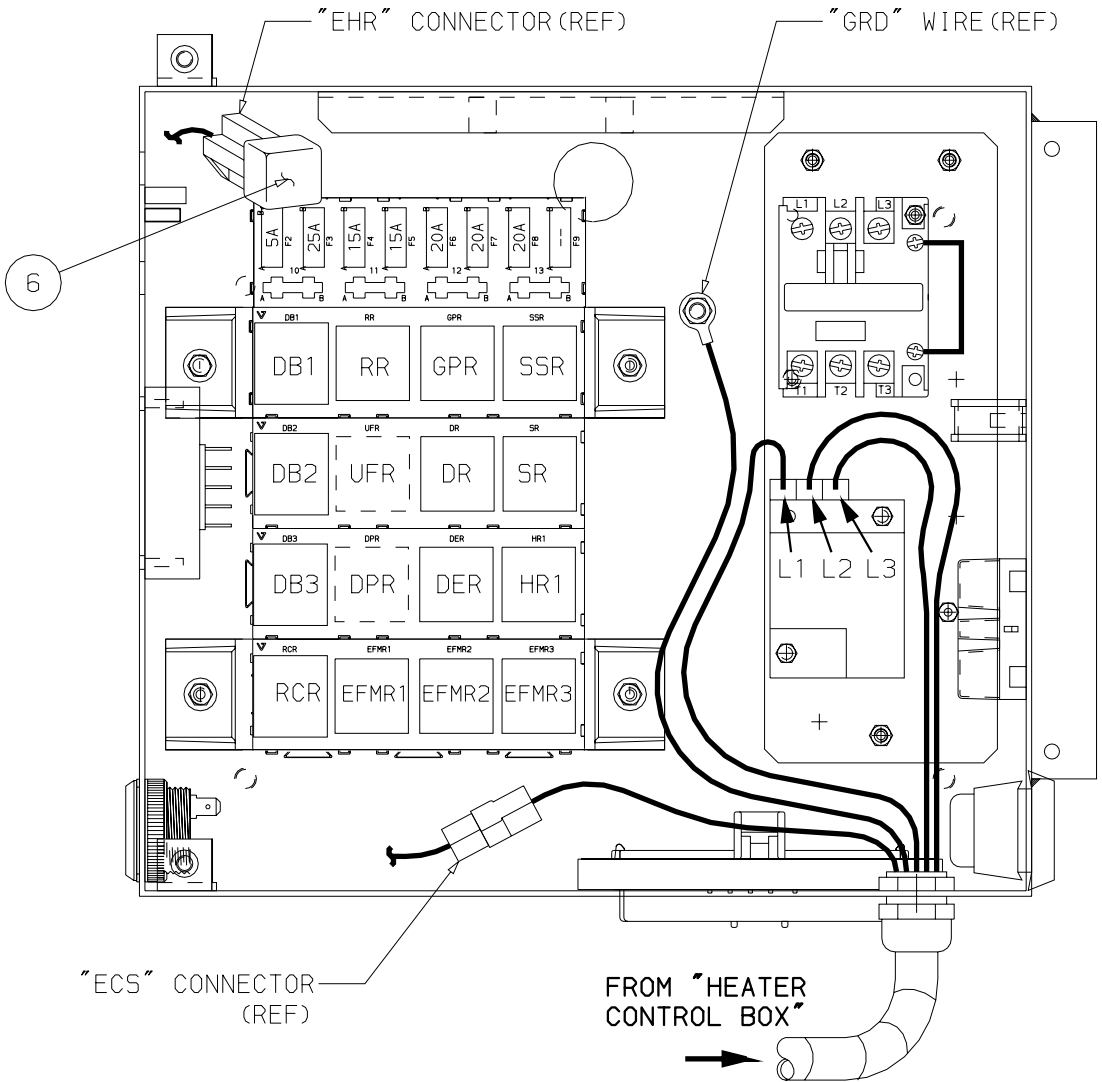
-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01	SUPERSEDES	TITLE	INSTALLATION INSTRUCTIONS SUPRA 6/722/44 ELECTRIC & WATER HEAT	DRAWING NO. 98-03221 SHT. 4 OF	REV —
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE					



- 22.) SECURE THE HARNESS CONNECTOR TO THE "HEATER CONTROL BOX".
- 23.) INSTALL THE GROUND WIRE "GRD" TO THE GROUND STUD. STRIP 1/4" OF INSULATION FROM EACH WIRE AND MAKE REQUIRED CONNECTIONS.

ASSEMBLY NOTE: MAKE SURE THAT EACH PAIR OF HEATER WIRES ARE INSTALLED CORRECTLY.

EXAMPLE: INSTALL EACH PAIR OF WIRES ONE AT A TIME BY REMOVING THE TAPE FROM ONE PAIR AND INSTALL ONE WIRE INTO R1/a AND THE OTHER INTO R1/b. THE NEXT PAIR SHOULD BE INSTALLED ONE WIRE INTO R2/a AND THE OTHER INTO R2/b. THE LAST PAIR SHOULD USE ONE WIRE INTO R3/a AND THE OTHER INTO R3/b.



- 24.) SECURE THE HARNESS CONNECTOR TO THE "MAIN CONTROL BOX".
- 25.) INSTALL THE GROUND WIRE "GRD" TO THE GROUND STUD.
- 26.) FIND THE CONNECTOR WITH WIRES MARKED "EHC" INSIDE THE LOWER PORTION OF THE "MAIN CONTROL BOX" AND PLUG IN THE CONNECTOR.
- 27.) INSTALL THE RED WIRES MARKED L1, L2 & L3 INTO THE OVERLOAD AS SHOWN.
- 28.) FIND THE CONNECTOR WITH WIRES MARKED "EHR" INSIDE THE UPPER PORTION OF THE CONTROL BOX AND INSTALL THE RELAY (IT.6).

-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01	SUPERSEDES	TITLE	INSTALLATION INSTRUCTIONS SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT	DRAWING NO. 98-03221 SHT. 5 OF	REV -
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE					

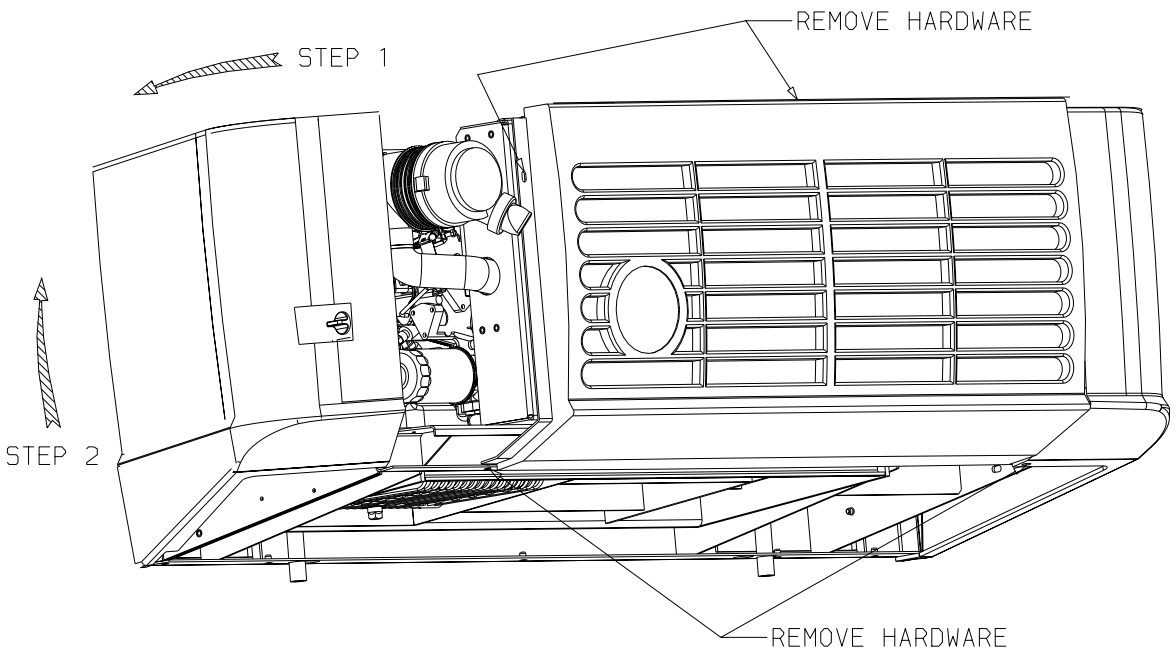


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

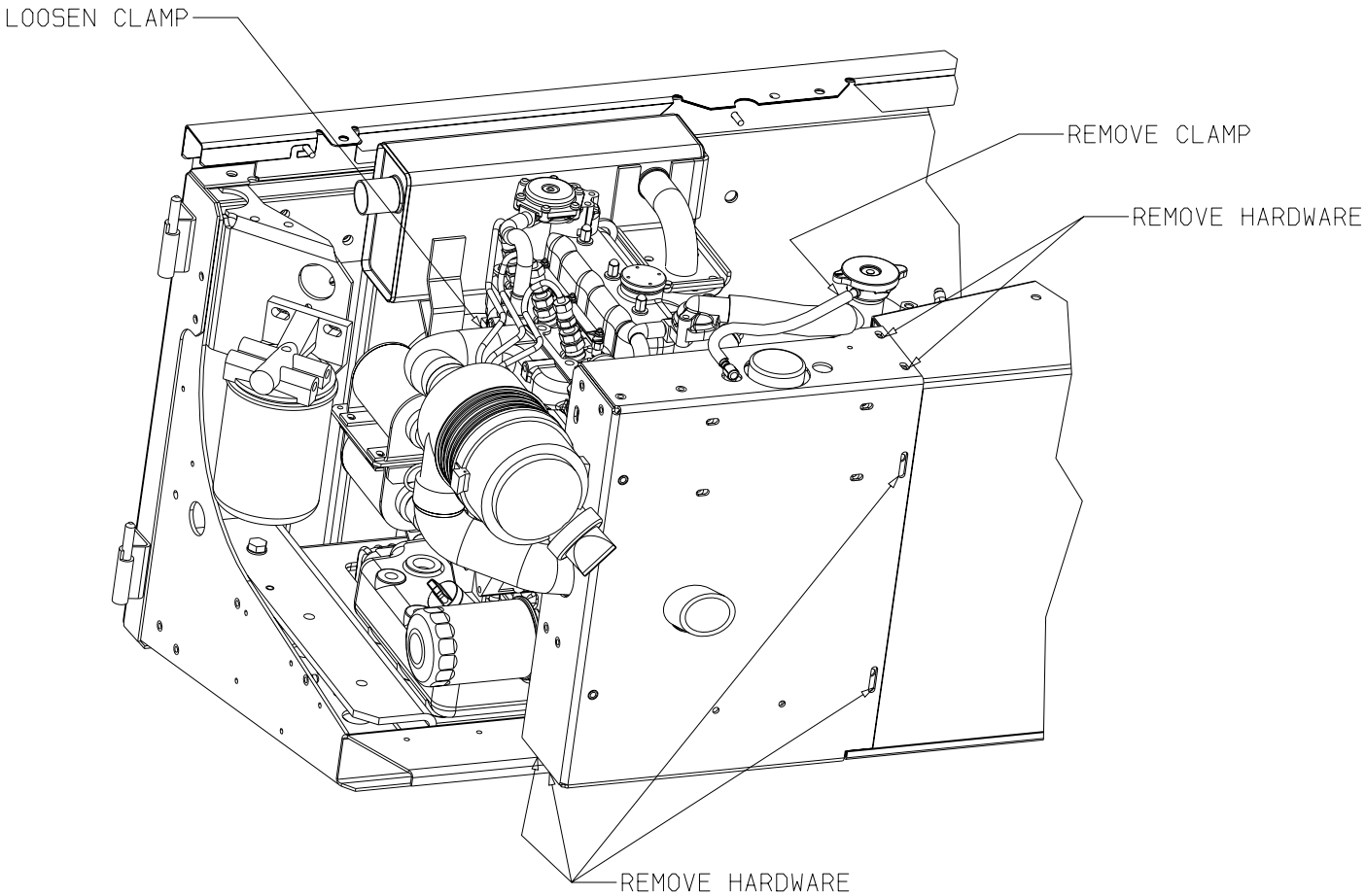
Carrier Transcold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT



- 29.) OPEN THE UNIT DOOR.
- 30.) LIFT UP TO REMOVE THE DOOR.
- 31.) REMOVE THE FRONT GRILLE BY REMOVING THE HARDWARE SHOWN. RETAIN THE HARDWARE FOR RE-ASSEMBLY.
- 32.) REMOVE THE FRONT GRILLE & PLACE THE DOOR & GRILLE IN A SECURE PLACE TO AVOID DAMAGE.



- 33.) REMOVE THE ENGINE COOLANT BY FOLLOWING ALL LOCAL, STATE & FEDERAL REGULATIONS.
- 34.) LOOSEN THE ENGINE AIR CLEANER CLAMP, AND REMOVE THE OVERFLOW CLAMP.
- 35.) REMOVE THE HARDWARE SHOWN(RETAIN FOR LATER RE-USE), AND REMOVE THE WATER BOTTLE BRACKET.

(CONTINUED ON NEXT SHEET)

-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01	SUPERSEDES	TITLE	INSTALLATION INSTRUCTIONS SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT	DRAWING NO. 98-03221 SHT. 6 OF	REV —
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE					

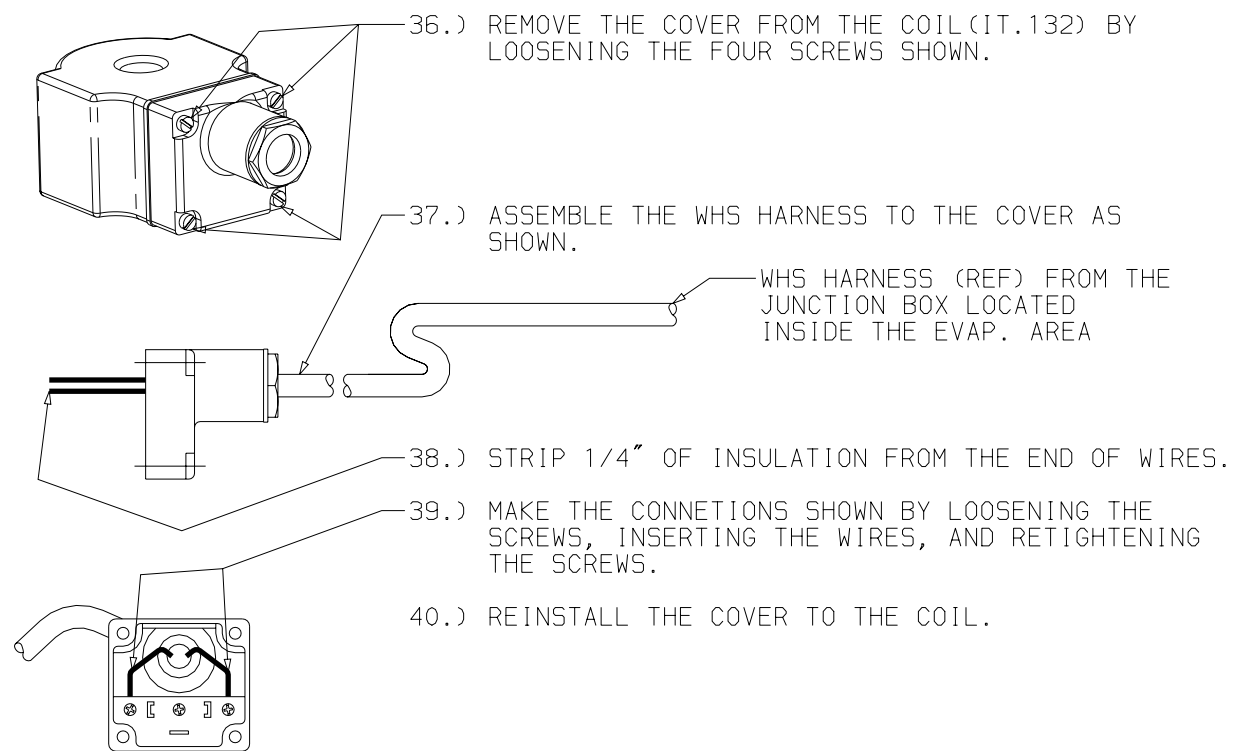


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

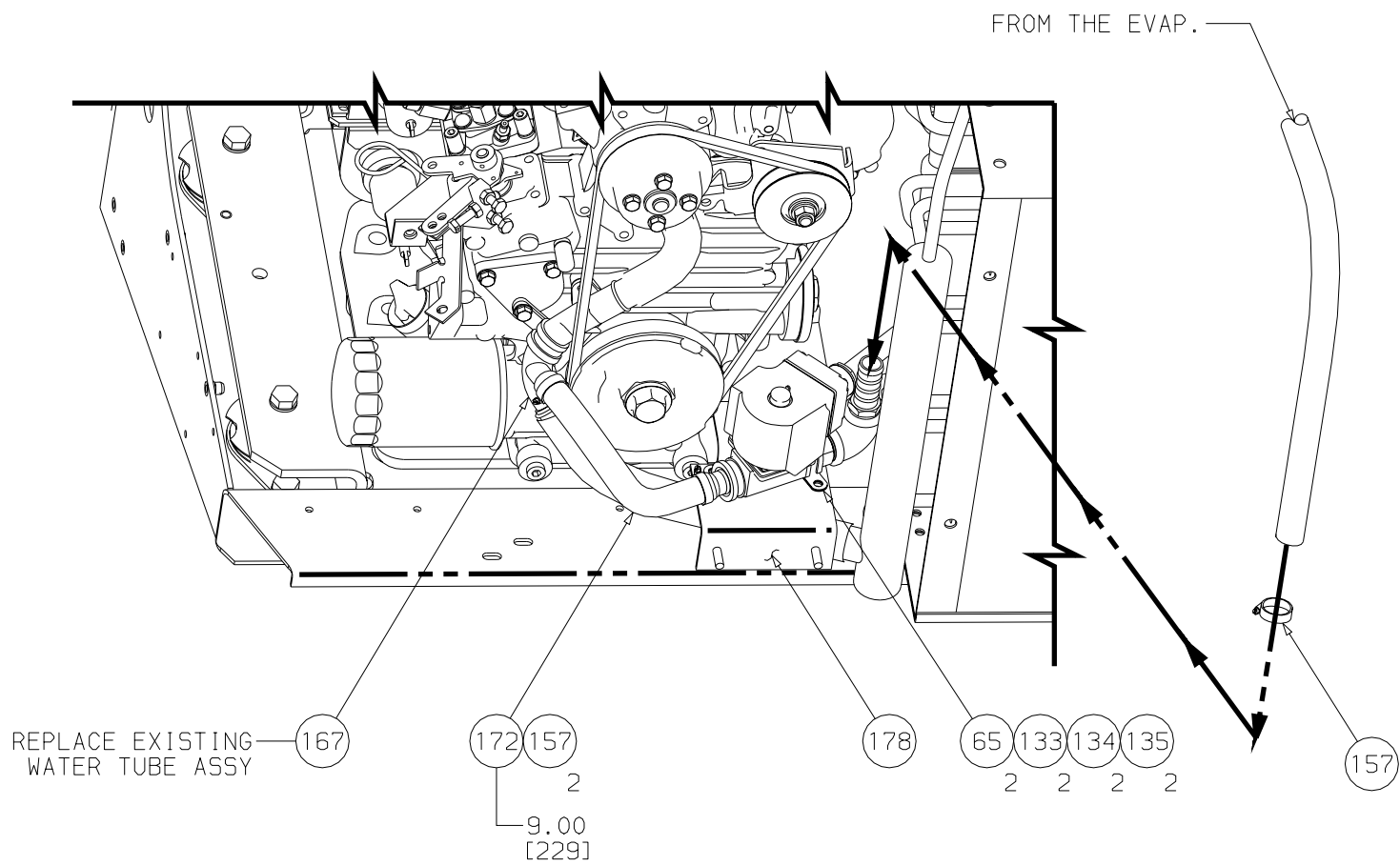
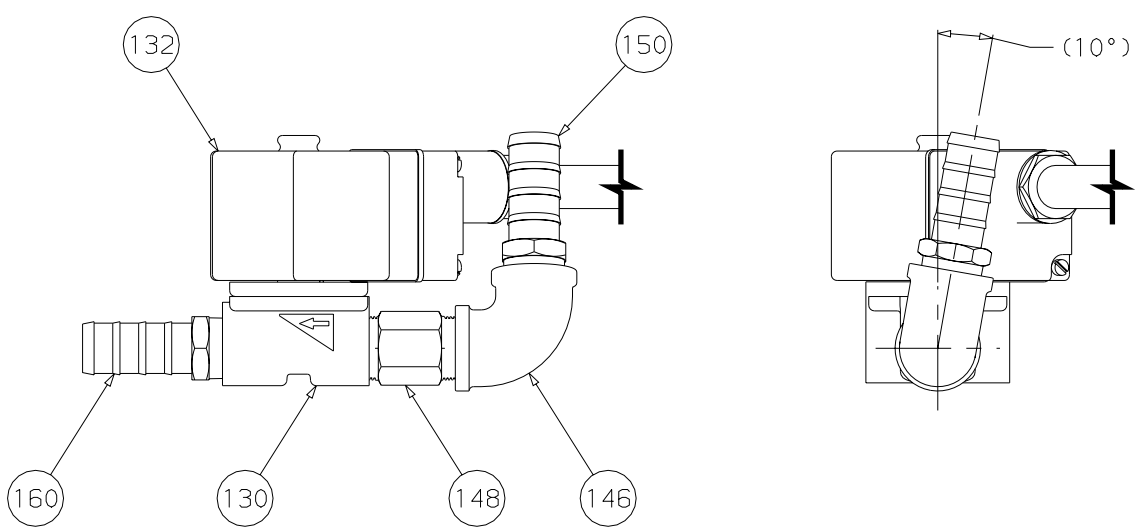
Carrier Transcold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT



41.) CREATE THE VALVE ASSEMBLY (SHOWN BELOW) MAKING CERTAIN TO USE THREAD SEALANT ON ALL THREADS.



- 42.) REPLACE EXISTING WATER TUBE ASSEMBLY WITH NEW WATER TUBE ASSEMBLY (IT.167).
NOTE: IT MAY BE NECESSARY TO REMOVE THE WATER PUMP BELT TO REPLACE THE WATER TUBE.
- 43.) SECURE THE VALVE ASSEMBLY TO THE BRACKET (IT.178) USING CLAMPS (IT.133) AND HARDWARE (IT'S: 65, 134 & 135)
- 44.) CUT A PIECE OF TUBE (IT.172) TO 9 INCHES [229 mm] AND INSTALL BETWEEN THE WATER TUBE ASSEMBLY AND VALVE ASSEMBLY USING CLAMPS (IT.157).
- 45.) ROUTE ONE OF THE HOSES FROM THE EVAPORATOR TO THE VALVE ASSEMBLY AND ASSEMBLE IT TO THE VALVE WITH CLAMP (IT.157).

(CONTINUED ON NEXT SHEET)

B	CORRECTED ORIENTATION OF IT.130; REV'D NOTE 37 PER IPCA71N2006P03/25					MGC	4/10/03
-	INITIAL RELEASE PER PCA71N2126P01					MGC	11/12/01
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE

SUPERSEDES

TITLE

INSTALLATION INSTRUCTIONS
SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT

DRAWING NO.

98-03221
SHT. 7 OF

REV

B

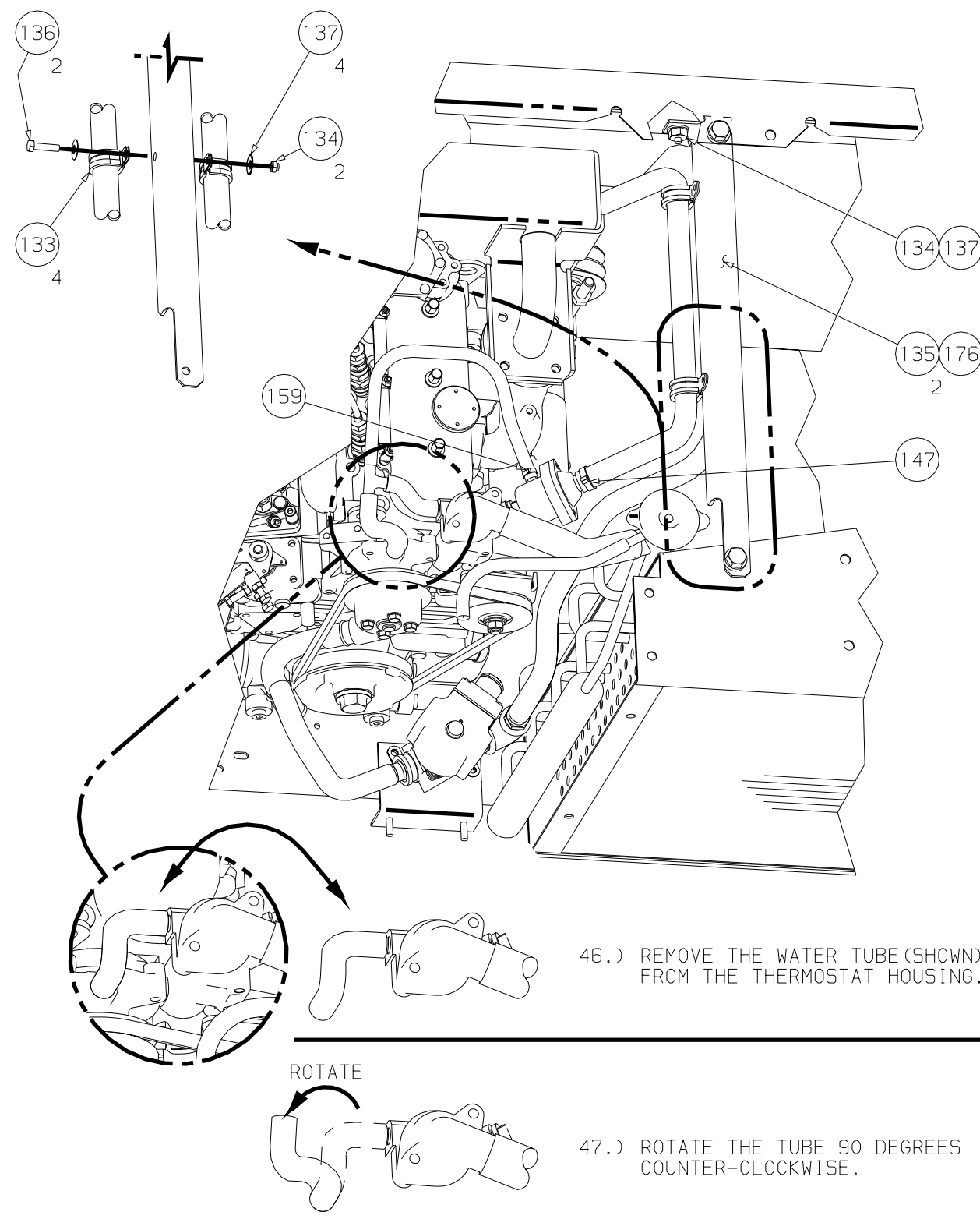


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

Carrier Transcold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

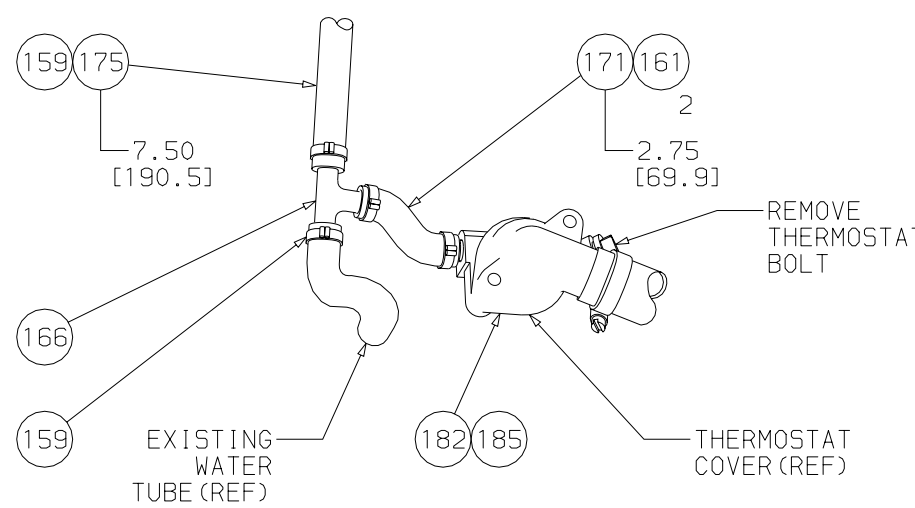
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT

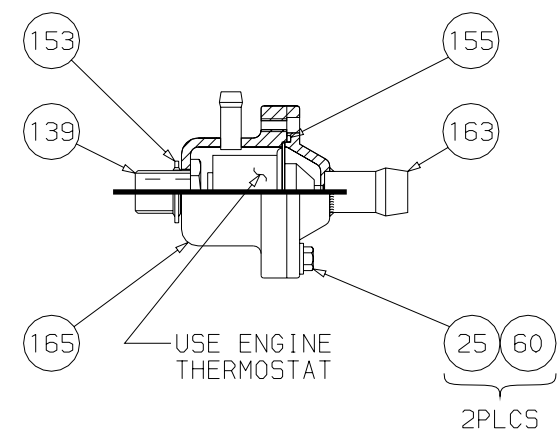


46.) REMOVE THE WATER TUBE (SHOWN)
FROM THE THERMOSTAT HOUSING.

47.) ROTATE THE TUBE 90 DEGREES
COUNTER-CLOCKWISE.



- 48.) INSTALL THE TUBE (IT.171) BETWEEN
THE TEE (IT.166) & THE THERMOSTAT
HOUSING USING CLAMPS (IT.161).
- 49.) INSTALL THE TUBE (IT.175) TO THE
TEE (IT.166) WITH CLAMP (IT.159) &
SECURE THE EXISTING HOSE TO TEE
WITH CLAMP (IT.159).
- 50.) REMOVE THE THERMOSTAT BOLT FROM
THE SIDE OF THE THERMOSTAT
HOUSING.
- 51.) REMOVE THE THERMOSTAT COVER &
REPLACE THE EXISTING THERMOSTAT
WITH THE THERMOSTAT SUPPLIED
(IT.182).



- 52.) CREATE THE WATER HEAT THERMOSTAT ASSEMBLY (SHOWN ABOVE) USING THE THERMOSTAT
WHICH WAS REMOVED FROM THE ENGINE.
- 53.) INSTALL THE ASSEMBLY INTO THE ENGINE THERMOSTAT HOUSING IN PLACE OF THE BOLT
WHICH WAS REMOVED EARLIER.
- 54.) ROUTE THE REMAINING HOSE FROM THE EVAPORATOR TO THE THERMOSTAT ASSEMBLY &
SECURE THE HOSE WITH CLAMP (IT.147).
- 55.) ROUTE THE HOSE COMING FROM THE TEE TO THE THERMOSTAT ASSEMBLY & SECURE THE
HOSE WITH CLAMP (IT.159).
- 56.) ADD THE SUPPORT BRACKET (IT.176) BETWEEN THE FRAME & CONDENSER.
- 57.) SUPPORT THE TUBES COMING FROM THE EVAPORATOR TO THE SUPPORT BRACKET WITH
CLAMPS (IT.133) AND HARDWARE (IT'S: 134 & 136).

(CONTINUED ON NEXT SHEET)

C	REV'D HTR HOSE ROUTING; ADDED IT.137 & EXPLODED VIEW IT.60 WAS IT.142 PER PCA71N213GP04					MGC	4 NOV 2004
A	ADDED CALLOUT BALLOON IT.163 PER PCA71N214GP02					MGC	6/21/02
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE

SUPERSEDES

TITLE

INSTALLATION INSTRUCTIONS
SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT

DRAWING NO.
98-03221
SHT. 8 OF

REV
C

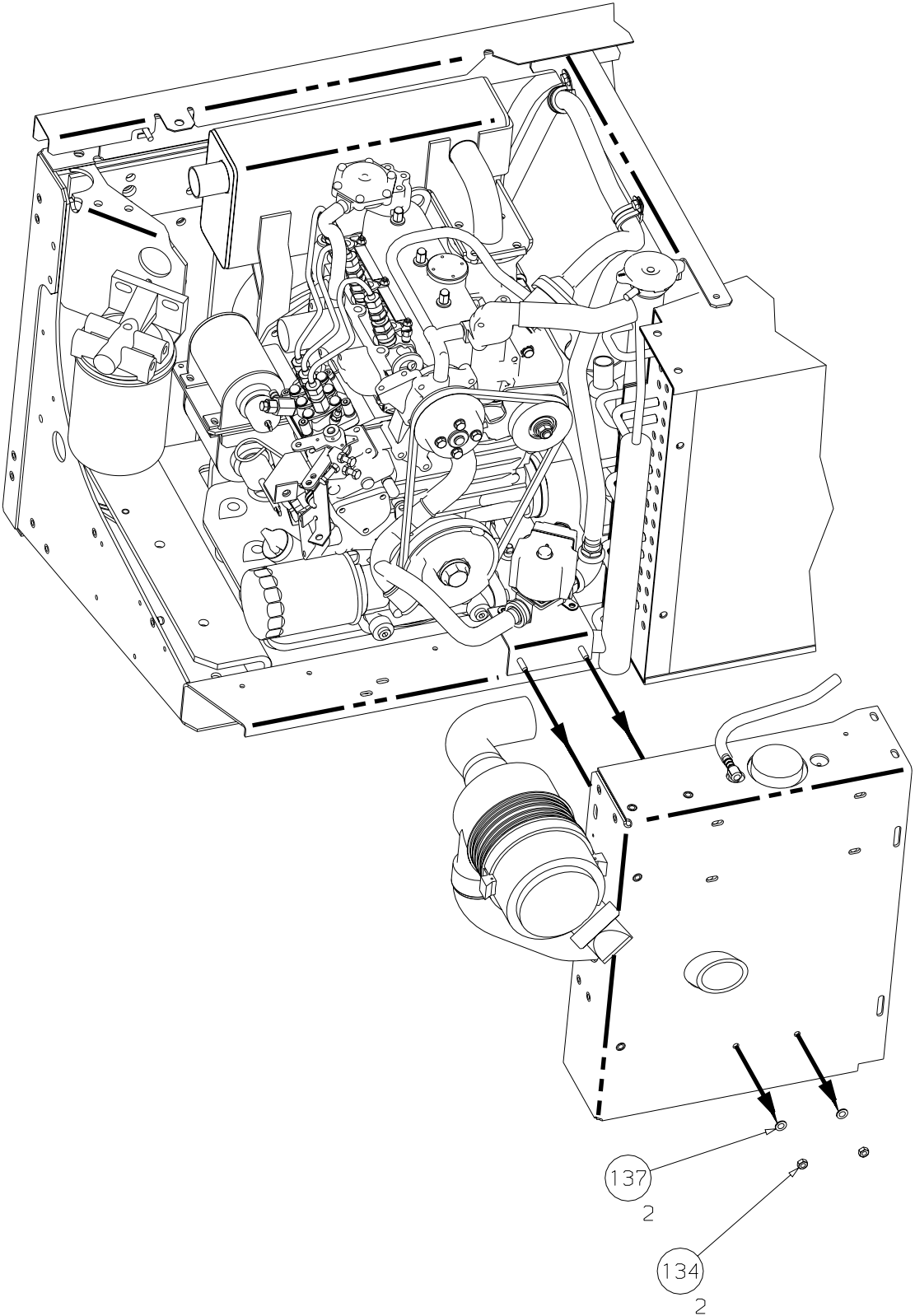


UNITED
TECHNOLOGIES
CARRIER
TRANSCOLD

Carrier Transcold Division
Carrier Corporation
P.O. Box 4805
Syracuse, New York 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION
AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE
CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER
CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS
DOES NOT CONSTITUTE PART PERFORMANCE OR
ACCEPTANCE OF CONTRACT



- 58.) REINSTALL THE WATER BOTTLE BRACKET BY ALIGNING THE WATER SOLENOID BRACKET TO THE HOLES IN THE WATER BOTTLE BRACKET.
- 59.) REMOUNT THE WATER BOTTLE BRACKET WITH PREVIOUSLY REMOVED HARDWARE.
- 60.) ROUTE THE REMAINING HOSE FROM THE EVAPORATOR TO THE THERMOSTAT ASSEMBLY &
- 61.) REASSEMBLY THE FRONT GRILLE & DOOR TO THE UNIT.
- 62.) ADD WATER & ANTIFREEZE BACK INTO THE SYSTEM AT THE DESIRED MIXTURE.
- 63.) RECONNECT THE UNIT BATTERY AND RUN-TEST THE UNIT CHECKING FOR PROPER OPERATION. MAKE SURE TO TOP OF THE COOLANT LEVELS.
- 64.) REINSTALL ALL CONTROL BOX DOORS/PANELS.

C	REV'D HTR HOSE ROUTING PER PCA71N213GP04					MGC	4 NOV 2004
-	INITIAL RELEASE PER PCA71N212GP01					MGC	11/12/01
SYM	REVISION RECORD	ENGRG.	DATE	APPLICATION ENGRG.	DATE	DRAWN BY	DATE

SUPSEDES

TITLE

INSTALLATION INSTRUCTIONS
SUPRA 6/722/44 ELECTRIC & WATER HEAT KIT

DRAWING NO.
98-03221
SHT. 9 OF

REV
C