

TAG DMS-100 3X9013 Universal Fan Tray

Installation Guide

INSTALLATION GUIDE FOR

TAG's DMS-100 NT3X90 UNIVERSAL FAN TRAY

PN # TFT-3X9013T

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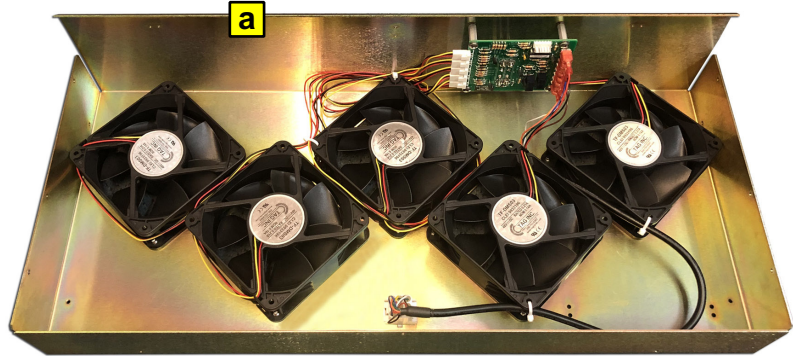
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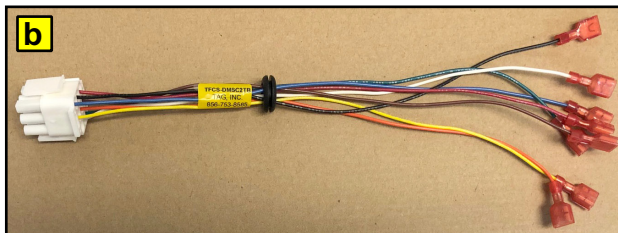


TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****1. TFT-3X9013T Contents:****a. UNIVERSAL FAN TRAY**

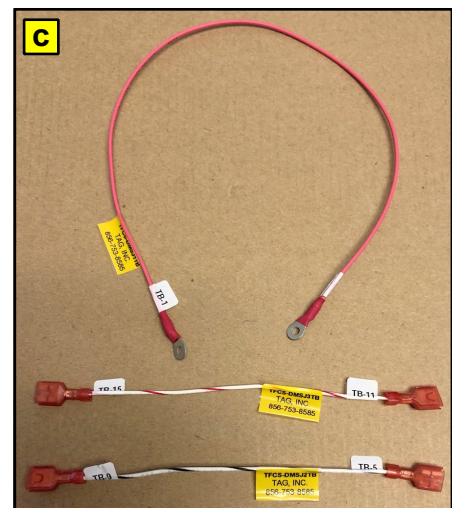
- (1) New Fan Tray
w/ Universal Mounting Holes
- (5) TF-DMS03, DMS 48V Fans
w/ TTL Tach & 3 Wire Plug
- (1) Fan Alarm Control Board
w/ Built in Sensors
- (1) Wiring Harness w/ Connector

**b. TFCS-DMSC2TB****Adapter Cable**

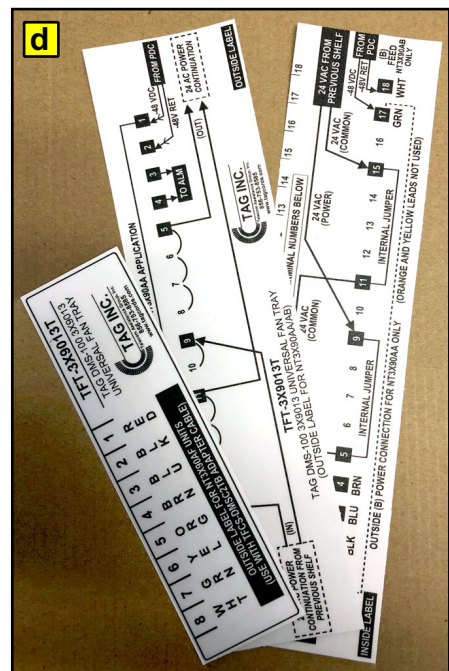
- (1) NT3X90AA/AB, NT3X90AF Adapter Cable

**c. TFT-3X90CBLKIT****BAG w/ POWER JUMPER CABLES**

- (1) TFCS-DMSJ1TB; External, RED, TB-17 to TB-1
- (1) TFCS-DMSJ3TB; Internal, WHITE/RED, TB-15 to TB-11
- (1) TFCS-DMSJ2TB; Internal, WHITE/BLACK, TB-9 to TB-5

**d. TFT-3X90LBLKIT****BAG w/ LABELS**

- (1) Internal Wiring Block Label (for NT3X90AA/AB)
- (1) External Wiring Block Label (for NT3X90AA/AB)
- (1) External Wiring Block Label (for NT3X90AF)

**e. TFT-3X90MTGKIT****BAG w/ MOUNTING HARDWARE**

- (6) Internal Lock Washers
- (6) Screws
- (6) Hex Nuts
- (8) Faston Tabs



TFT-3X9013T
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**f. PRINTED GUIDE**

- (1) 590117, Installation Guide

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****2. Tools Needed:**

- (1) 5/16" Nut Driver
- (1) 1/4" Nut Driver
- (1) Phillips Screwdriver
- (1) Flat Head Screwdriver
- (1) Volt Meter

Section 1 -

*The following procedure details replacing failed Nortel DMS-100 **NT3X90AC** Fan Units with TAG's **NEW Universal Fan Tray (TFT-3X9013T)**.*

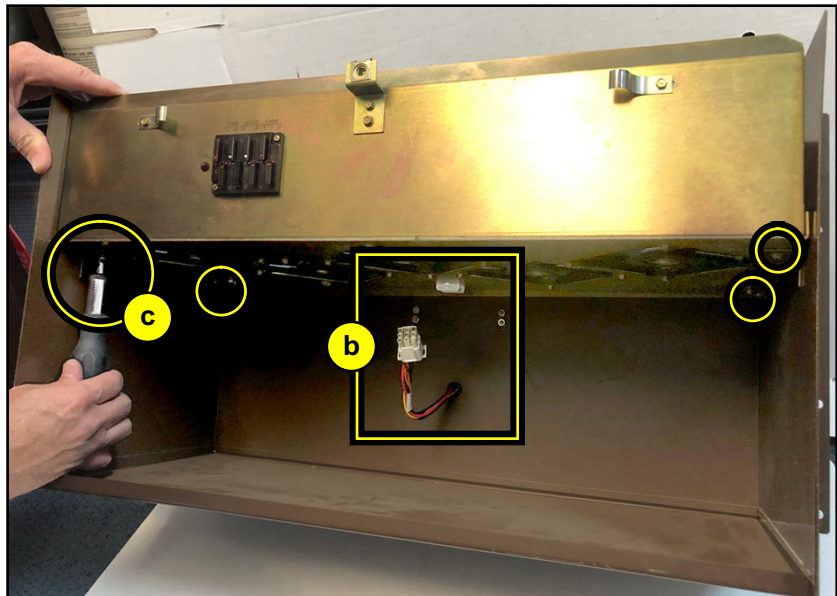
3. Identify the NT3X90AC Fan Tray:**NT3X90AC****"AC" FAN TRAY**

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****4. Remove the Fan Tray from the NT3X90AC Fan Cooling Unit:**

(Note: The pictures below are for demonstration purposes only; do not remove the NT3X90AC fan cooling unit from the DMS bay when installing the new TFT-3X9013T fan tray)

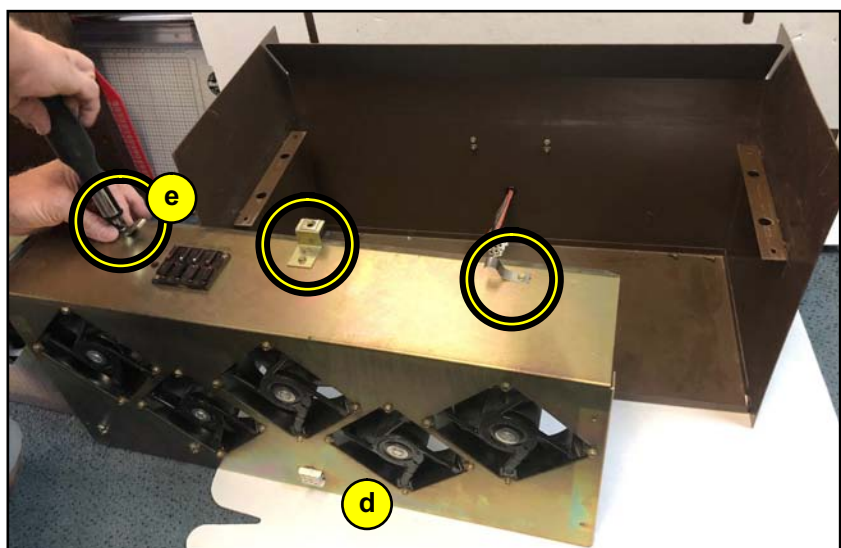
- a. Power down the NT3X90AC cooling unit by using standard Nortel procedure.
- b. Inside the NT3X90AC cooling unit; unplug the 9 Pin connector from the fan tray.

- c. Using a ¼ nut driver; remove the (4) screws underneath on each corner holding the NT3X90AC fan tray in place.



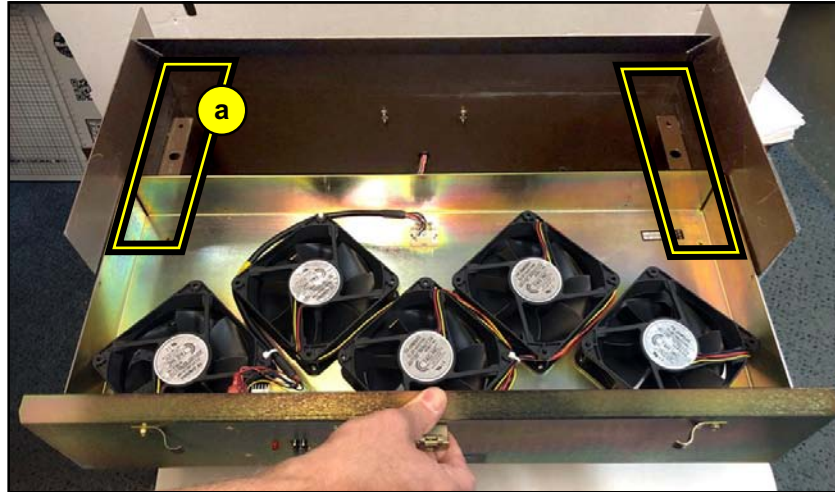
- d. Remove the fan tray from the cooling unit frame.

- e. Using a ¼ nut driver; remove the (3) pieces of external hardware from the old tray. Replace this hardware onto the new TFT-3X9013T fan tray.

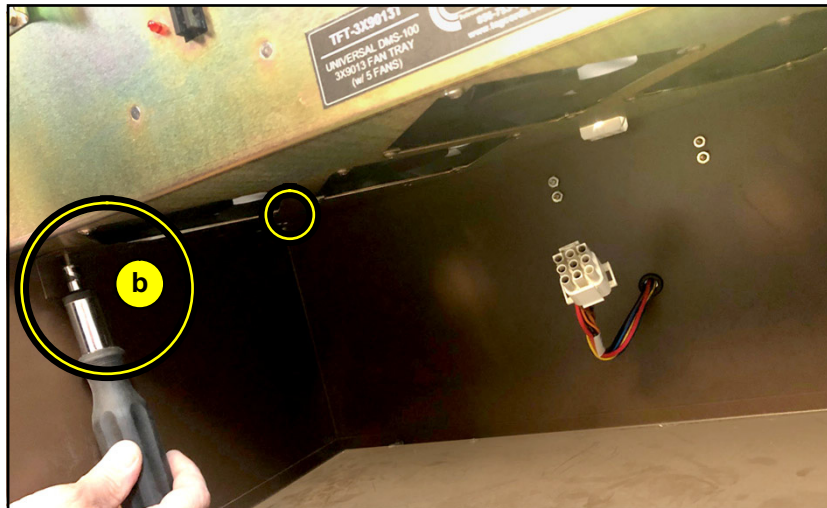


TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****5. Install the TFT-3X9013T on NT3X90AC Fan Cooling Unit:**

- a. Place the TFT-3X9013T fan tray inside the frame onto the side rail supports.



- b. Install the (4) screws in the same position that were removed from the original fan tray.



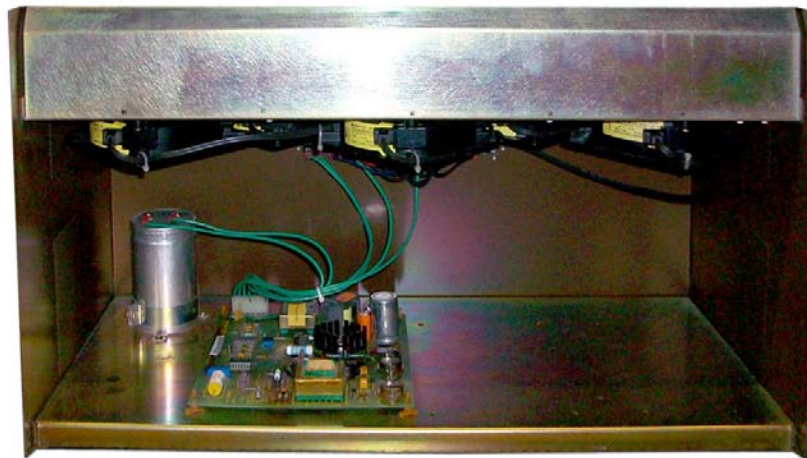
- c. Plug the 9 Pin connector to the TFT-3X9013T fan tray.
- d. Reinstall cooling unit fuses for the associated NT3X90AC fan cooling unit. (A fuse pre-charge tool will not be needed)

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****Section 2 -**

*The following procedure details replacing failed 24VAC Nortel DMS-100 **NT3X90AA / NT3X90AB** Fan Units with TAG's **NEW 48VDC Universal Fan Tray** without paddle sensors (TFT-3X9013T).*

6. Identify the 24VAC NT3X90AA/AB Fan Tray:

(Note: For typical daisy chain layout, see the following page)

NT3X90AA/AB**"AA/AB" FAN TRAY**

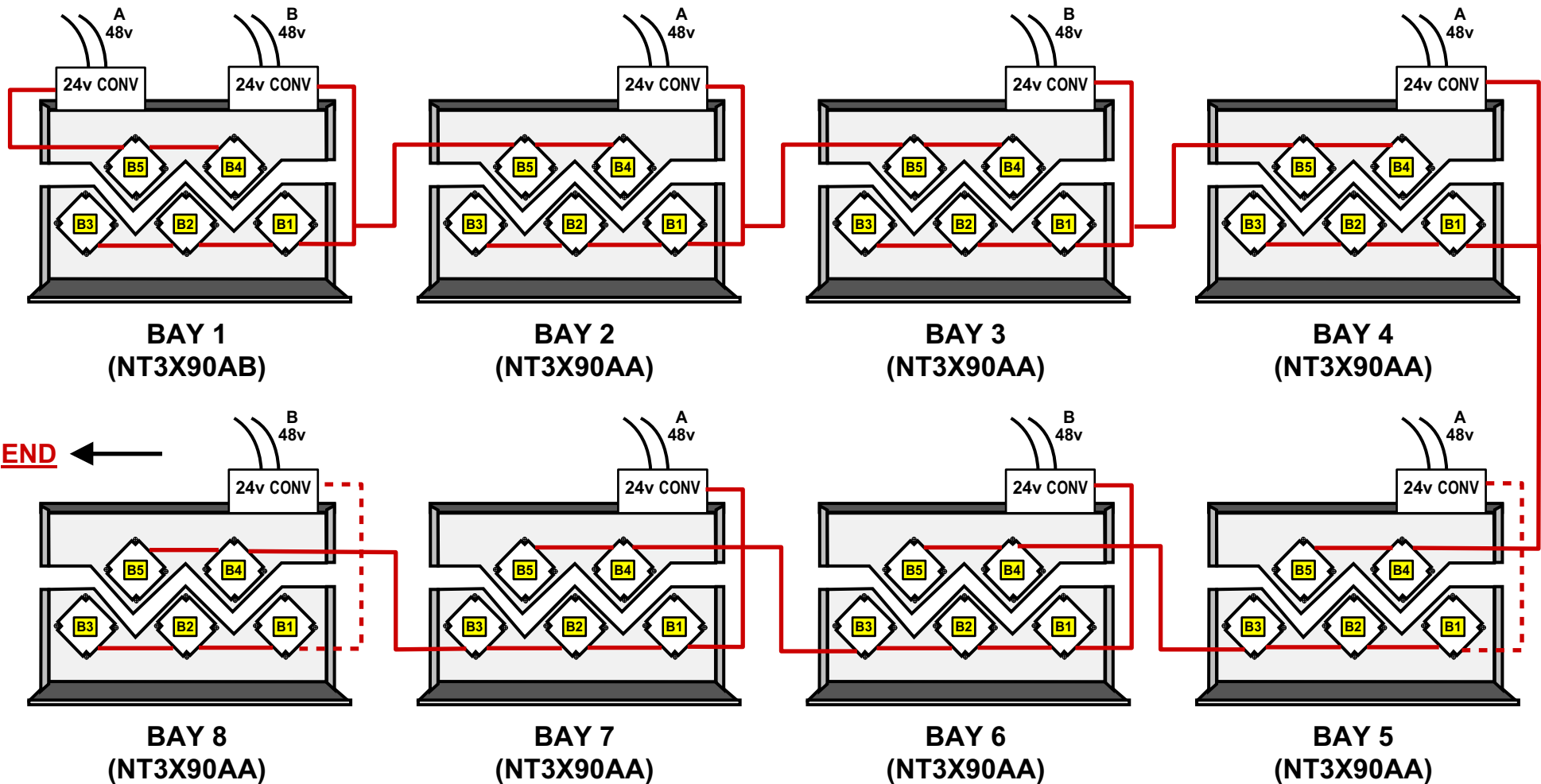
TAG DMS-100 3X9013 Universal Fan Tray - Installation Guide

7. NT3X90AA/AB Daisy Chain Configuration Diagram:

(Identify which bays need to be replaced)

Note: Trays may not be in consecutive bays

BEGINNING →

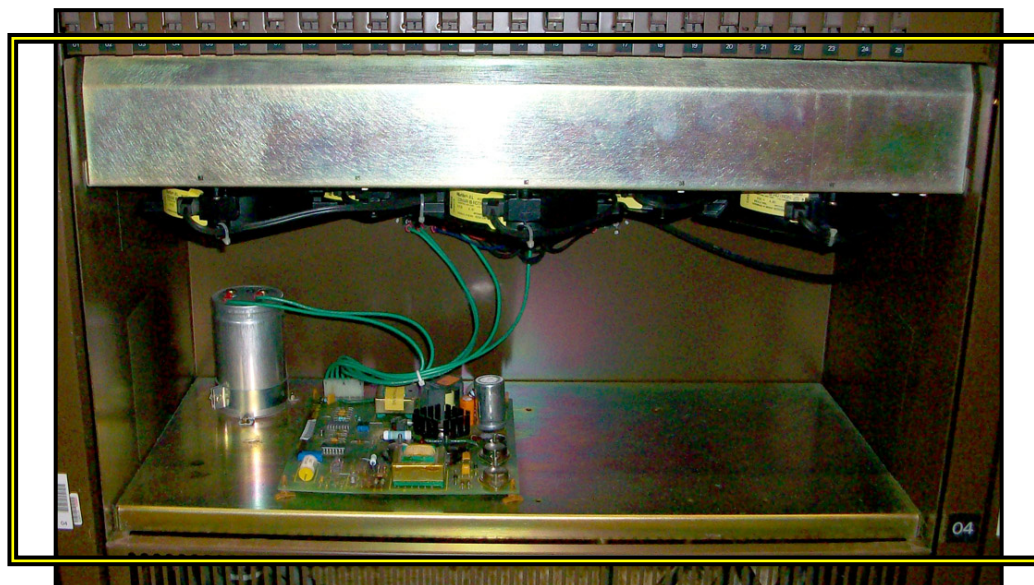


TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide**

WARNING HIGH VOLTAGE: Remove any fuses from the PDC before removing any NT3X90AA / NT3X90AB Fan Units that are being converted or bypassed.

8. Remove the NT3X90AA/AB, Fan Cooling Unit from the Bay:

(Use standard DMS-100 removal procedures)

**BACK OF COOLING UNIT WIRING NOTES:**

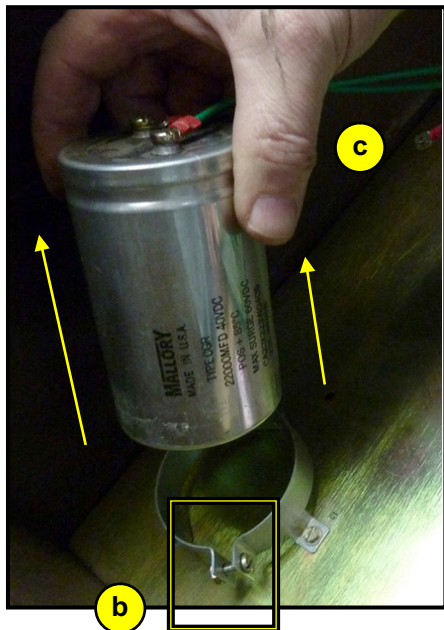
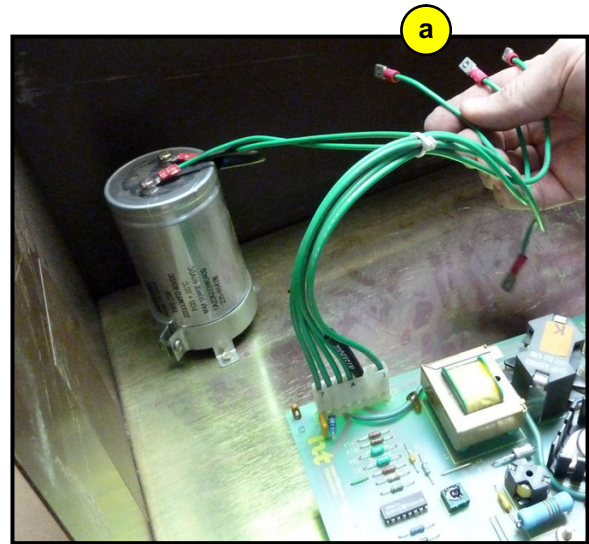
- Remove and tape / label each wire covering lugs.
- Green wires # 3 and # 4 are connected to FSP fuse and will still have voltage. Tape each carefully covering lugs.

TAG DMS-100 3X9013 Universal Fan Tray

Installation Guide

9. Remove the 24VAC Power Supply Unit:

- a. Detach the fastons (green wires) connecting the power supply & capacitor from the internal wiring block on the DMS-100 fan unit as shown.

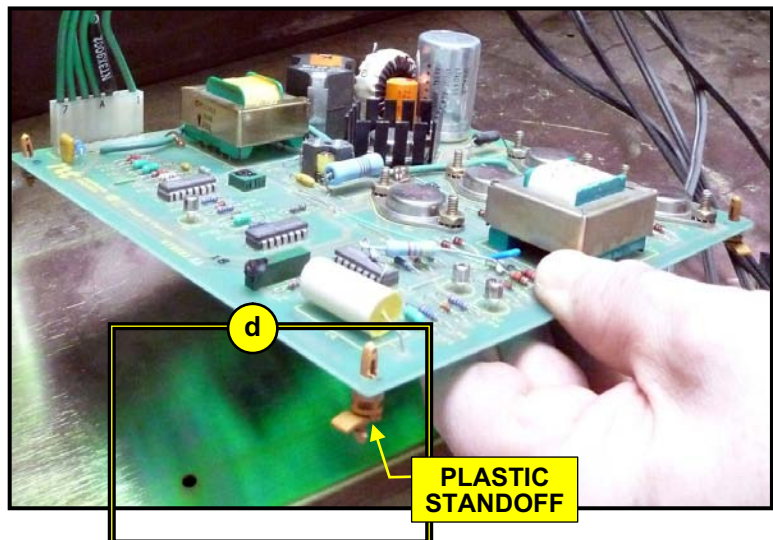


- b. Loosen the screw on the capacitor bracket.

- c. Remove the capacitor from the fan unit. *

* **Caution:** Capacitor may still have voltage present.

- d. Remove the power supply unit (including the (4) plastic standoffs) from the fan tray.



**24VAC POWER SUPPLY UNIT
DETACHED FROM THE
DMS-100 NT3X90AA FAN UNIT**



Note: After the power supply unit is fully detached from the fan unit, it is no longer needed.

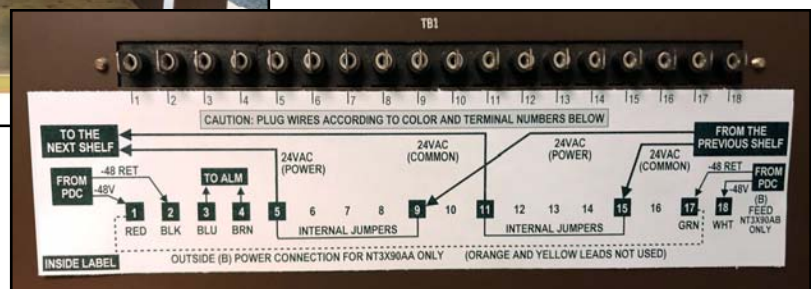
TAG DMS-100 3X9013 Universal Fan Tray

Installation Guide

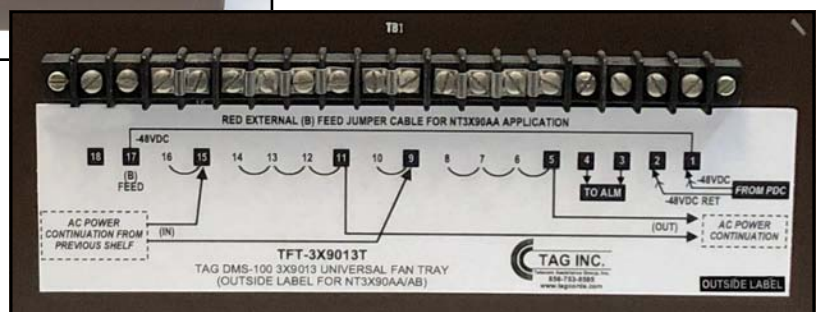
10. Attach the Internal and External Wiring Diagrams:

- a. Clean and place the **INTERNAL & EXTERNAL** wiring diagram labels under the 18 position terminal block on the inside and on the outside of the cooling unit frame. (Make sure that the numbers line up accordingly)

INTERNAL WIRING DIAGRAM



EXTERNAL WIRING DIAGRAM



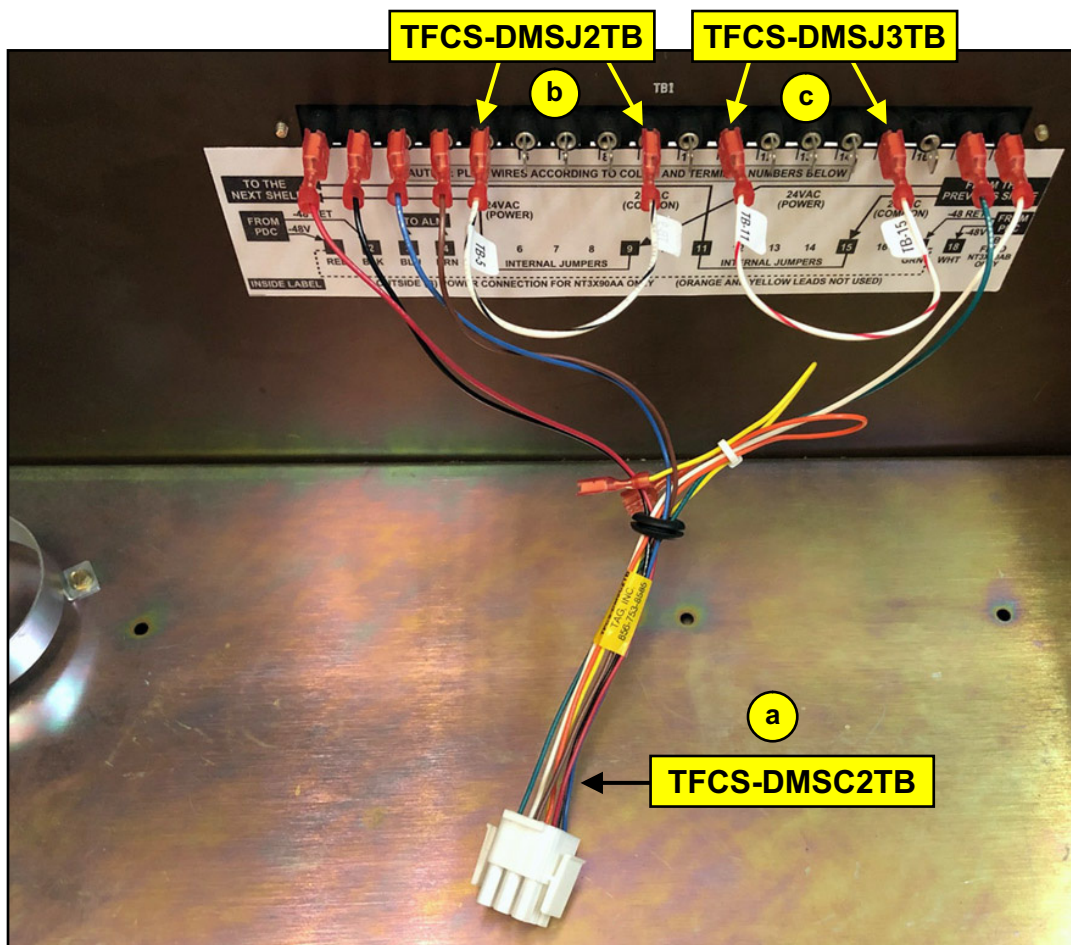
TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****11. Attach the Adapter Cable (internal-fastons) & Internal Jumpers:**

- a. Using the supplied **TFCS-DMSC2TB**; connect each color coded wire/faston according to the colors indicated on the **INTERNAL** wiring diagram label. (**Orange and Yellow are not used**)
- b. Using the supplied **TFCS-DMSJ2TB**; connect **TB-5** to position **# 5** on the terminal block and connect **TB-9** to position **# 9** on the terminal block.
- c. Using the supplied **TFCS-DMSJ3TB**; connect **TB-11** to position **# 11** on the terminal block and connect **TB-15** to position **# 15** on the terminal block.

WIRING DETAIL:

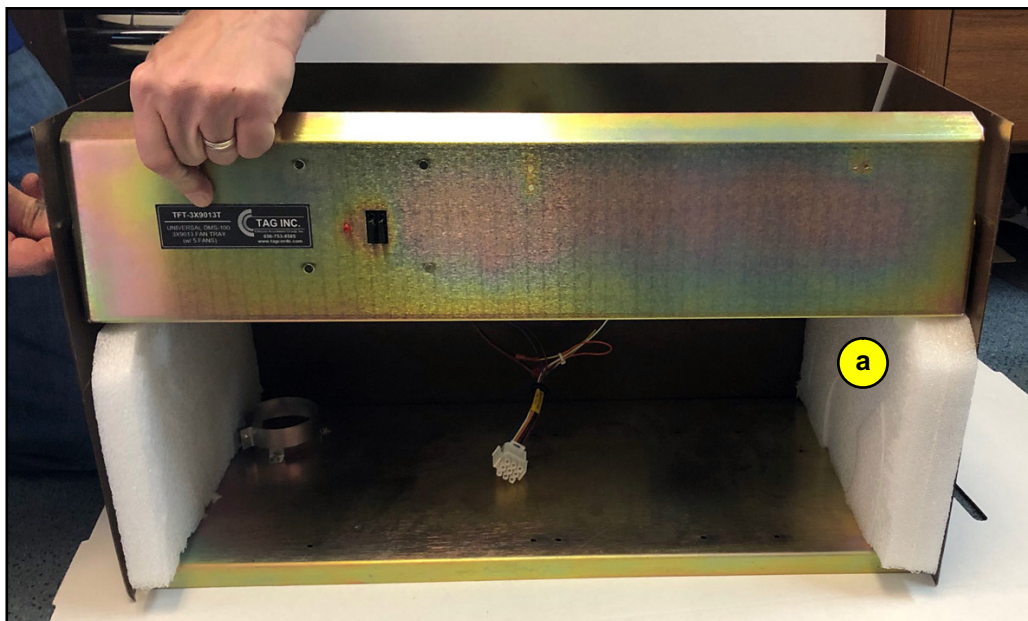
CAUTION: PLUG WIRES ACCORDING TO COLOR AND TERMINAL NUMBERS BELOW

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RED	BLK	BLU	BRN													GRN	WHT
				INTERNAL JUMPERS					INTERNAL JUMPERS								

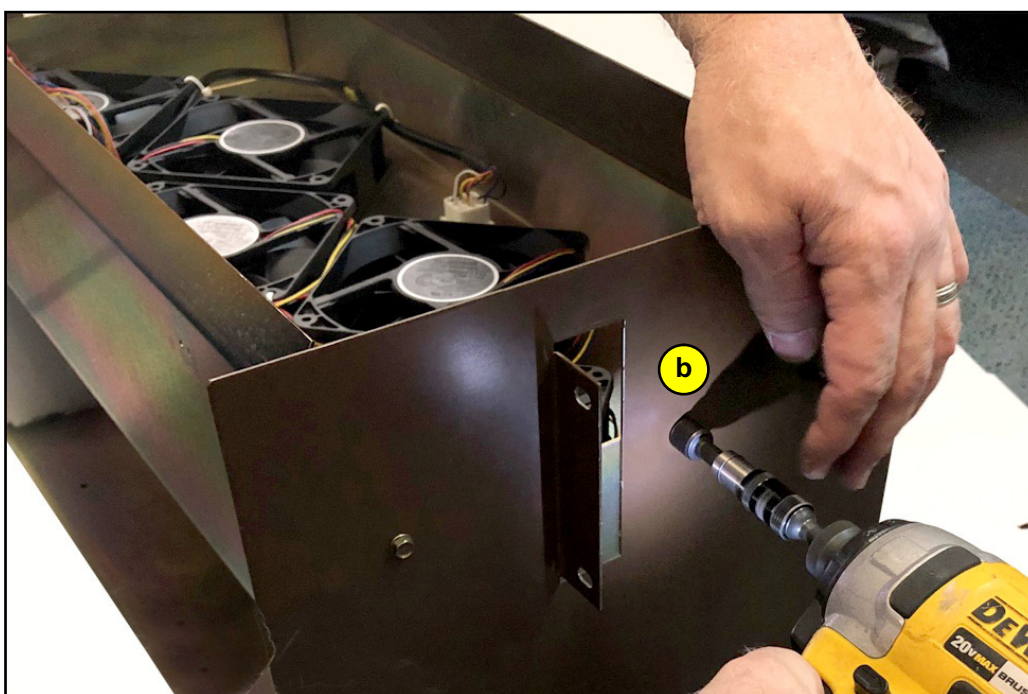
**INSIDE VIEW WITH ADAPTER CABLE AND INTERNAL JUMPERS**

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****12. Install the TFT-3X9013T on NT3X90AA/AB Fan Cooling Unit:**

- a. Place the TFT-3X9013T on to the supplied foam inserts on each side.



- b. Using the ¼ nut driver; install the (7) screws around the outside of the cooling unit connecting the new fan tray to the frame.

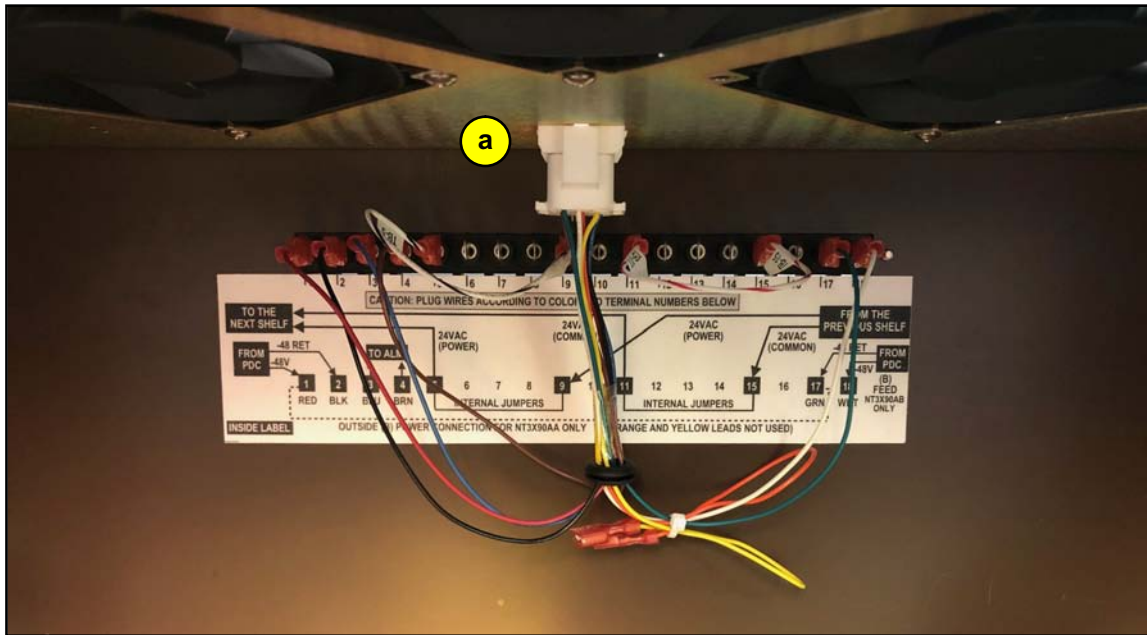


TAG DMS-100 3X9013 Universal Fan Tray

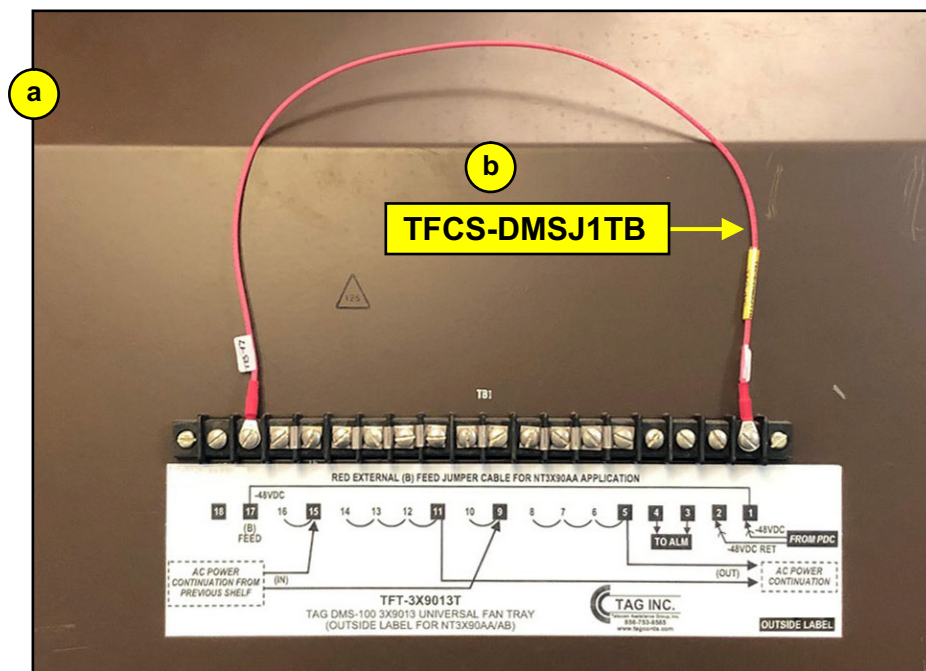
Installation Guide

13. Attach the Adapter Cable (internal-9 Pin) to the TFT-3X9013T:

- a. Plug the 9 Pin connector of the adapter cable to the **TFT-3X9013T**.

**14. Reinstall the NT3X90AA/AB Unit w/ Tray Upgrade & Attach the External Jumper:**

- a. Reinstall the NT3X90AA/AB unit back into the DMS bay.
- b. Reinstall wiring accordingly. Using the supplied **TFCS-DMSJ1TB** jumper cable; connect **TB-1** and **TB-17**.



- c. Reinstall cooling unit fuses for the associated NT3X90AA/AB cooling unit.
(a fuse pre-charge tool will not be needed)

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****Section 3 -**

*The following procedure details replacing failed Nortel DMS-100 **NT3X90AF** Fan Units with TAG's **NEW Universal Fan Tray (TFT-3X9013T)**.*

15. Identify the NT3X90AF Fan Tray:**NT3X90AF****"AF" FAN TRAY****NOTE:**

- Common failure point on existing NT3X90AF is the tach chip on the circuit board.
- All (5) fans will spin and still create alarm.

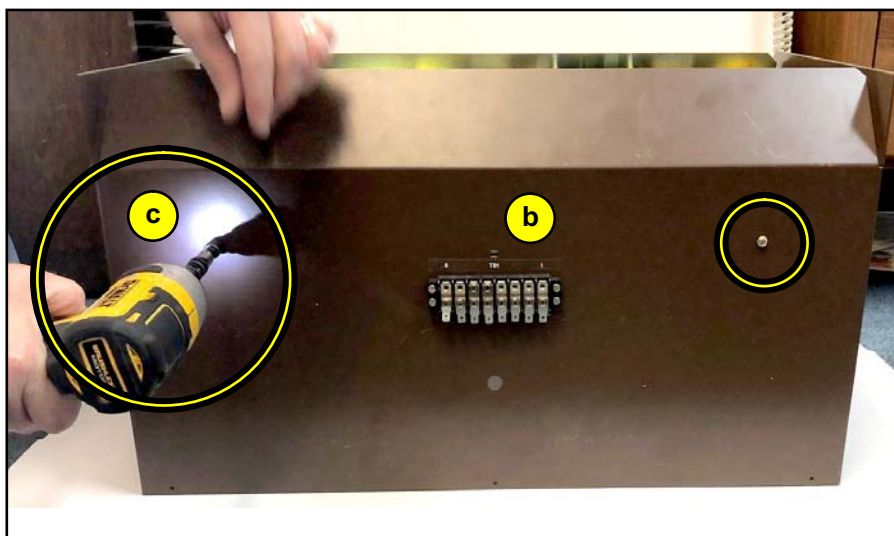
TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****16. Remove the NT3X90AF Fan Cooling Unit from the Bay:**

- a. Remove NT3X90AF cooling unit from the bay using standard Nortel procedure.



**NT3X90AF UNIT
(INSIDE VIEW WITH OLD TRAY)**

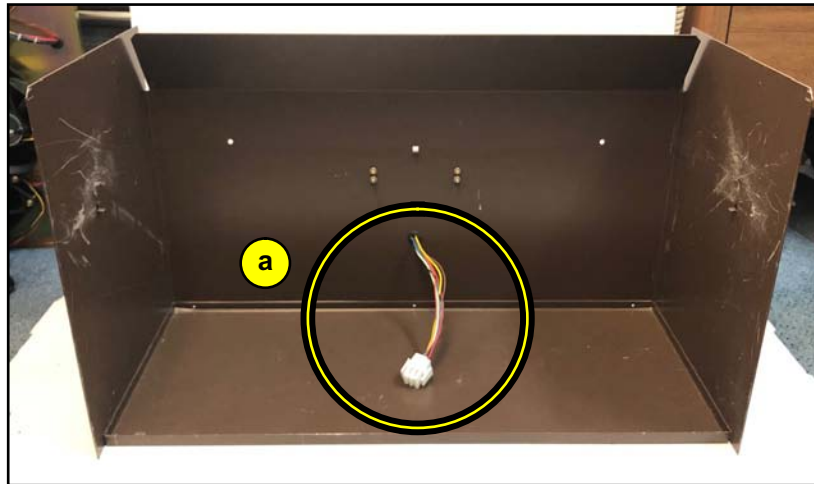
- b. Remove all faston connectors from the outside terminal block and push through the access hole in cooling unit frame.
- c. Using a ¼ nut driver; remove the (4) screws from the fan tray around the outside of the fan cooling unit.



- d. Remove the old fan tray from the NT3X90AF fan cooling unit frame.

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****17. Attach External Wiring Diagram & Adapter Cable:**

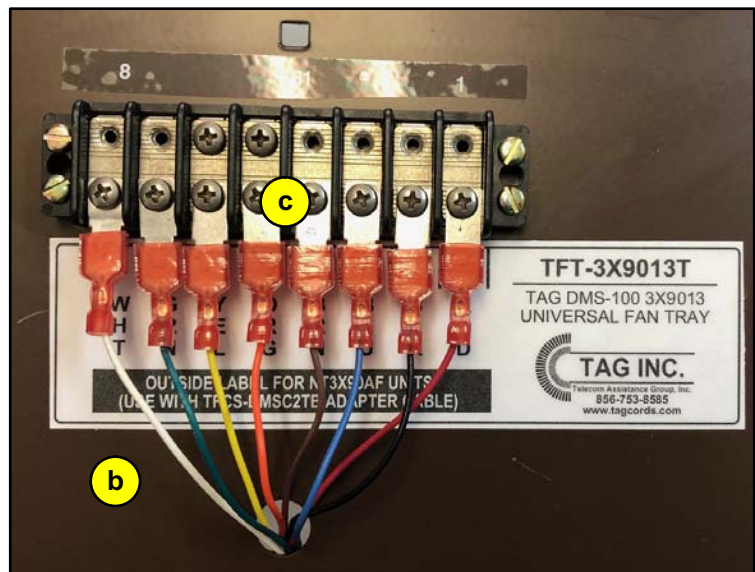
- a. Using the supplied **TFCS-DMSC2TB**; feed faston connectors through the access hole from the inside of the fan cooling unit frame.

NT3X90AF UNIT (INSIDE VIEW)**NT3X90AF UNIT (OUTSIDE VIEW)**

- b. Clean and place the **OUTSIDE** wiring diagram label under the 8 position terminal block on the outside of the cooling unit frame.

(Make sure that the numbers line up accordingly)

- c. Connect each color coded wire/faston according to the colors indicated on the wiring diagram label.

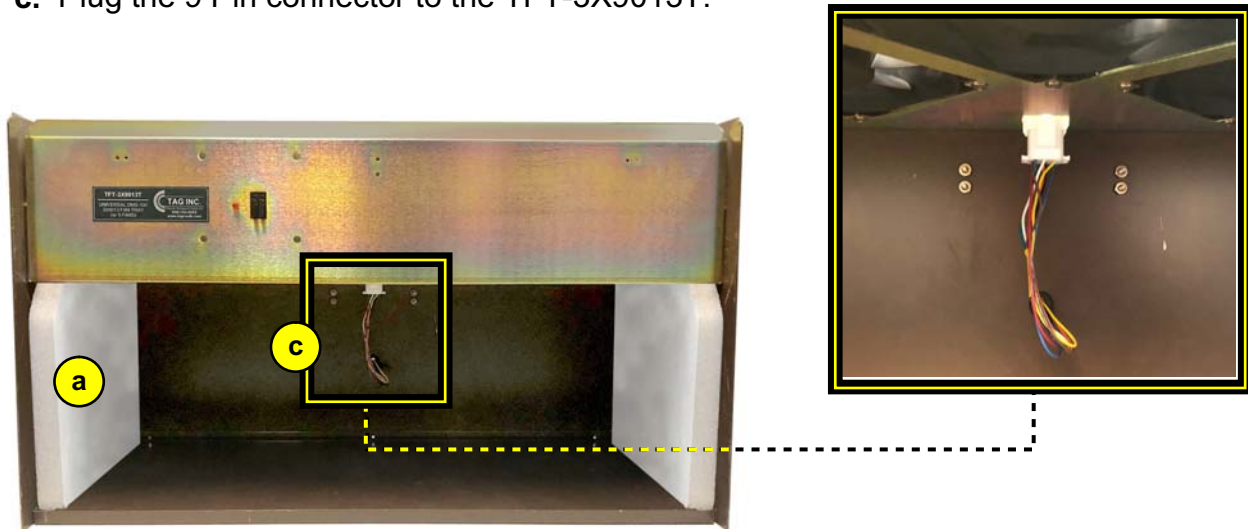
**NT3X90AF LABEL**

8	7	6	5	4	3	2	1	TFT-3X9013T	
W	G	Y	O	B	B	B	R	TAG DMS-100 3X9013	
H	R	E	R	R	L	L	E	UNIVERSAL FAN TRAY	
T	N	L	G	N	U	K	D	TAG INC.	
OUTSIDE LABEL FOR NT3X90AF UNITS								Telecom Assistance Group, Inc.	
(USE WITH TFCS-DMSC2TB ADAPTER CABLE)								856-753-8585	
								www.tagcords.com	

Continued on next page

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****18. Install the TFT-3X9013T on NT3X90AF Fan Cooling Unit:**

- a. Place the TFT-3X9013T on to the supplied foam inserts on each side.
- b. Using the ¼ nut driver; install the (4) screws around the outside of the cooling unit connecting the new fan tray to the cooling unit frame.
- c. Plug the 9 Pin connector to the TFT-3X9013T.



Note: Hardware on the old fan tray can be reused if needed.

**19. Reinstall the NT3X90AF Unit w/ Tray Upgrade:**

- a. Install the newly assembled cooling unit into the DMS bay.
- b. Reinstall wiring accordingly.
- c. Reinstall cooling unit fuses for the associated NT3X90AF fan cooling unit.
(A fuse pre-charge tool will not be needed)

TAG DMS-100 3X9013 Universal Fan Tray**Installation Guide****20. End of Installation Procedure**

- a. After reinstalling fan tray, install fuses & verify that the fans are running without alarms.
 - If there are alarms, see below.
- b. If all fans are not running:
 - Check fuse at PDC & fuses on the TFT-3X9013T.
- c. If fan alarm is present:
 - Check all fans.
 - Check fan sensor wiring.

21. Links to Youtube Installation Videos:

**DMS Universal Fan Tray (NT3X90AC)
48VDC Installation - No Paddle Sensors**

LINK:

<https://www.youtube.com/watch?v=8lqRieYcAj4>

NT3X90AC



**DMS Universal Fan Tray (NT3X90AA/AB)
24VAC Conversion Installation - No Paddle Sensors**

LINK:

https://www.youtube.com/watch?v=OZB__v6pgFM

NT3X90AA/AB



**DMS Universal Fan Tray (NT3X90AF)
48VDC Installation - No Paddle Sensors**

LINK:

<https://www.youtube.com/watch?v=9TKfTNESaFE>

NT3X90AF

