Instructions - Parts

DataTrak® Kits

313541L

EN

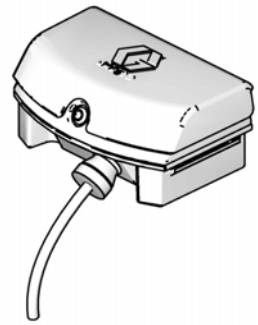
For providing pump diagnostics and material usage information for spray packages. For professional use only.

Conversion Kits 24A575, 24A576, 24A592, 24X550 and 24X552 Replacement Parts Kits 24B564, 24B565, and 24B566

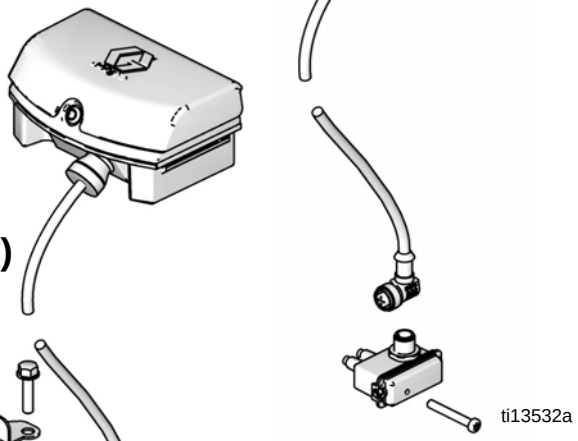
See page 3 for model information, including agency approvals.

Important Safety Instructions
Read all warnings and instructions in this manual and in your spray package manual (312797, 312798, 312799, or 313255). Save all instructions.

Kits 24A592 and 24X552 (XL Only)



Kit 24A575, 24A576 or 24X550 (XL Only)



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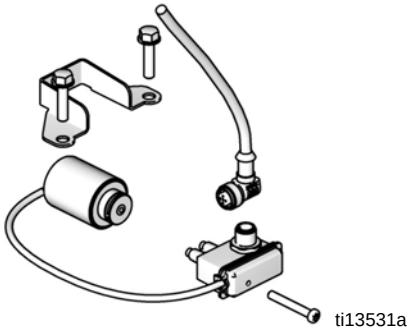

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Related Manuals

Part No.	Description
312797	Merkur Non-Heated Spray Packages
312798	Merkur Electrostatic Spray Packages
312799	Merkur Bellows Spray Packages
313255	Merkur Heated Spray Packages
334645	Xtreme XL Packages
3A5423	XL 6500 and 3400 Air Motors
3A4644	XL 10000 Air Motor

DataTrak Conversion Kits

Part No.	Description	Fits NXT Air Motor Models	Air Valve Replacement Kit Required*
24A575	DataTrak with Run-away Protection Kit	M04LN0	24A353
		M02LT0	-----
		M04LT0	-----
24A576	DataTrak with Run-away Protection Kit	M07LN0– M18LN0	24A354
		M07LT0– M18LT0	-----
24A592	DataTrak with Cycle Count Only Kit	MxxLN0	-----
24X550	DataTrak with Run-away Protection Kit	XL Motor 24X856	-----
		XL Motor XL65xx	
		XL Motor XL34xx	
24X552	DataTrak with Cycle Count Only Kit	XL Motor 24X856	-----
		XL Motor XL65xx	
		XL Motor XL34xx	

** Purchase and install the Air Valve Replacement Kit listed to make your MxxLN0 air motor compatible with DataTrak with Runaway Protection.*

DataTrak Replacement Parts Kits

Part No.	Description	Fits Air Motor Models
24B563	DataTrak Module	All
24B565	Solenoid and Reed Switch Assembly	M02LT0, M04LT0
24B566	Solenoid and Reed Switch Assembly	M07LT0–M18LT0
24B564	Reed Switch Assembly	MxxLN0

DataTrak™ includes agency approvals listed below.

Intertek
9902471
Class I, Div. 1, Group D T3A

2575

II 1 G
Ex ia IIA T3 Ga
ITS13ATEX27862X

Installation

WARNING

SPECIAL CONDITIONS FOR SAFE USE

Equipment must comply with the following conditions to avoid a hazardous condition which can cause fire or explosion.

- All label and marking material must be cleaned with a damp cloth (or equivalent).
- The electronic monitoring system is required to be grounded. See **Grounding** instructions in your spray package manual.

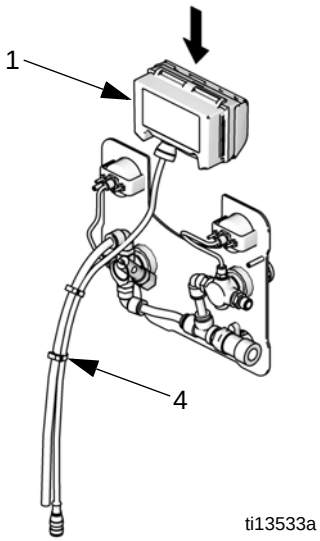
Merkur Air Motor Installation

Prepare to Install

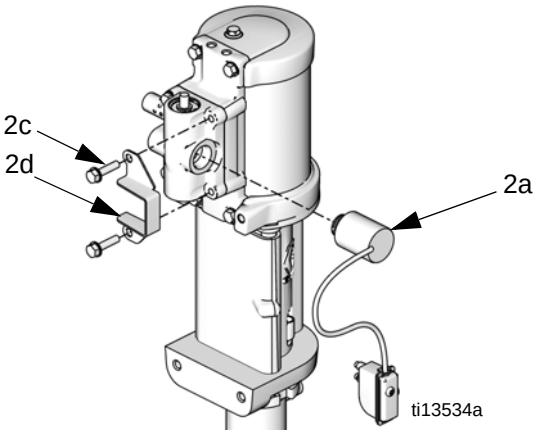
1. Relieve the pressure. Follow instructions in your spray package manual.
2. Disconnect the air line to the motor.

Install the Kit

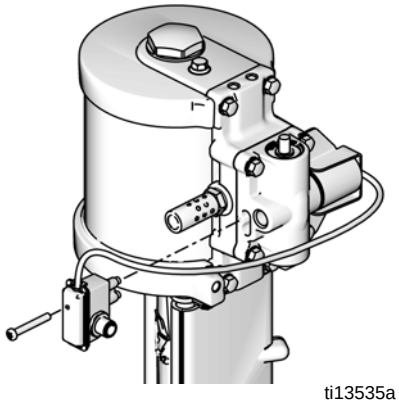
1. Remove the insert from the air control panel.
2. Install the DataTrak module (1) on the air control panel. Use the hose clips (4) provided to attach the DataTrak cable to the pump air line.



3. **Models 24A575 and 24A576 only:** Attach the solenoid (2a) and bracket (2d) to the air valve. Use the same screws (2c) that attach the air valve to the manifold, as shown.

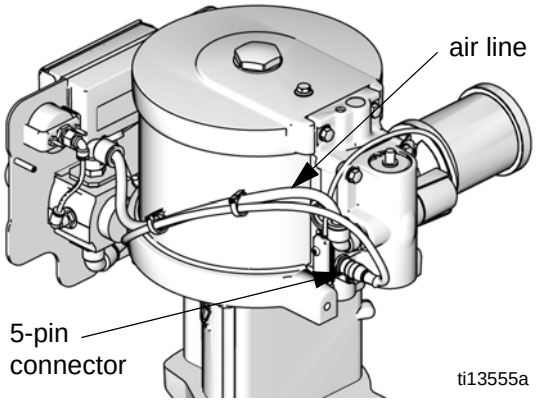


4. Use the screw provided to attach the reed switch just behind the air inlet. Remove the muffler, if needed, for easier access. Rotate the air inlet fitting as needed so the wrench flat clears the reed switch.



NOTE: Model 24A592 has no solenoid attached to the reed switch.

5. Connect the DataTrak cable to the 5-pin connector on the reed switch. Reconnect the air line to the motor.



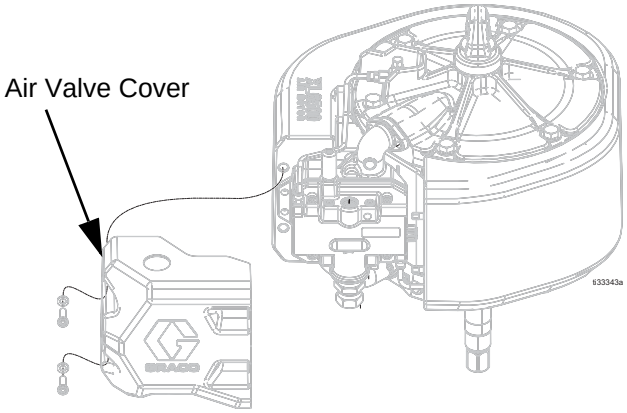
XL Air Motor Installation

Prepare to Install

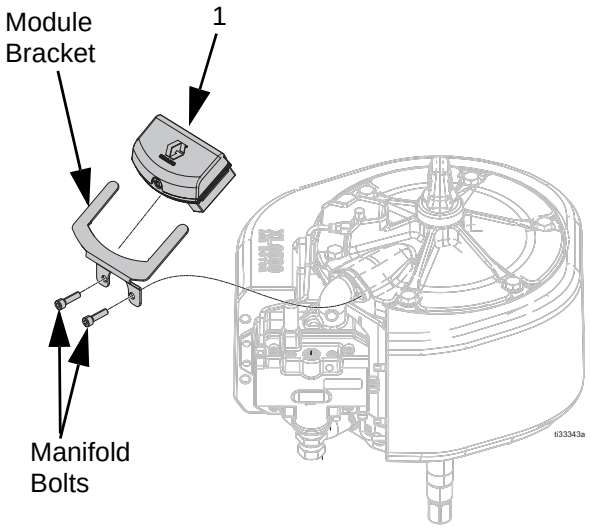
1. Relieve the pressure. Follow instructions in your spray package manual.
2. Disconnect the air line to the motor.

Install the Kit

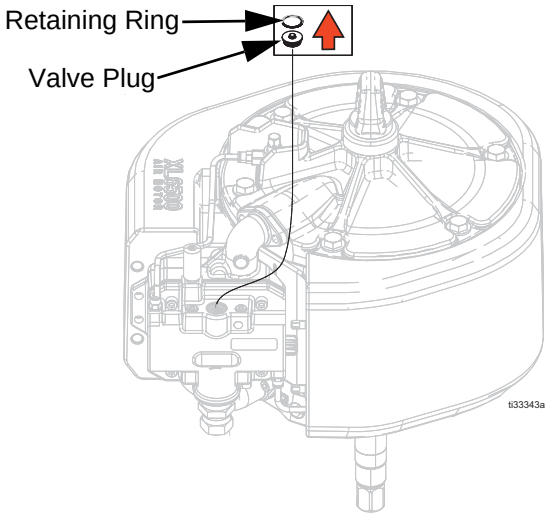
1. Remove the air valve cover.



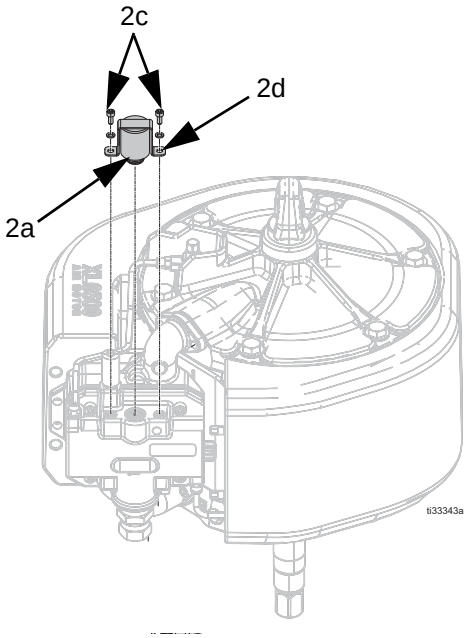
2. Remove the top exhaust manifold bolts, then use the bolts to attach the module bracket and DataTrak module (1).



3. **Model 24X550 only:** Remove the retaining ring and valve plug from the air valve.

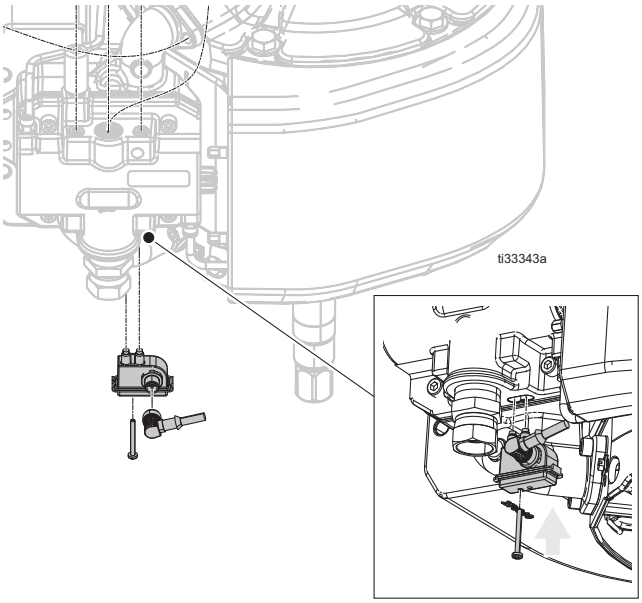


4. **Model 24X550 only:** Attach the solenoid (2a) and bracket (2d) to the air valve. Use the same screws (2c) that attach the air valve to the manifold, as shown.

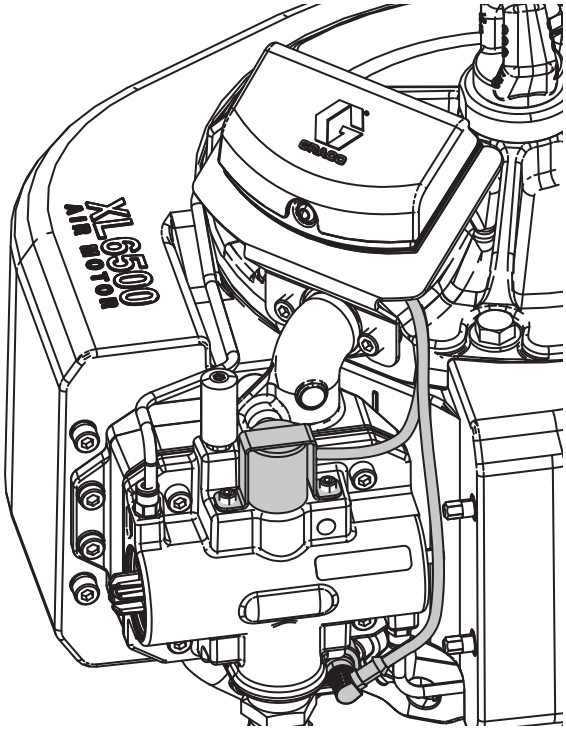


5. Use the screw provided to attach the reed switch just behind the air inlet. Attach the DataTrak cable to the 5 pin connector on the reed switch. Remove the muffler, if needed, for easier access. Rotate the air inlet fitting as needed so the wrench flat clears the reed switch.

   NOTE: Model 24X552 has no solenoid attached to the reed switch.



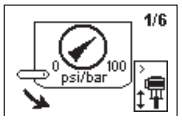
6. The DataTrak should be assembled as shown in the image below.



Check DataTrak Operation

Models 24A575, 24A576 and 24X550 (with Runaway Solenoid)

1. Enable runaway and set the runaway limit. Graco recommends setting runaway to 60.
2. Run the air motor at a speed slower than the runaway limit.
3. Check for proper reed switch operation.
   a. The DataTrak pump icon should move when the air motor changes direction.
   b. The Grand Totalizer and Batch Totalizer should increase by 1 for every air motor cycle.
4. Check for proper runaway operation.
   a. Run the air motor at a speed faster than the runaway limit.
   b. After 5 consecutive cycles, the DataTrak should stop the air motor and display the runaway diagnostic screen.



   c. Follow the runaway reset instructions in your spray package manual.
   d. After resetting, turn on the air supply. The air motor should run. Shut off the air until ready to pump.
5. Configure the DataTrak as needed, see page 9.

Model 24A592 and 24X552 (Without Runaway Solenoid)

1. Run the air motor to check for proper reed switch operation.
   a. The DataTrak pump icon should move when the air motor changes direction.
   b. The Grand Totalizer and Batch Totalizer should increase by 1 for every air motor cycle.
2. Configure the DataTrak as needed, see page 9. Be sure to disable runaway monitoring.

DataTrak Controls and Indicators

Key for Fig. 1

AA Runaway Limit, in cycles per minute (user settable; 00=OFF)
AB Lower Displacement (user settable)
AC Flow Rate Units (user settable to ↕/min, gpm [US], gpm [Imperial], oz/min [US], oz/min [Imperial], l/min, or cc/min)
AD LED (fault indicator when lit)
AE Display
PF Prime/Flush Key (Enables Prime/Flush mode. While in Prime/Flush mode, runaway protection is disabled and the batch totalizer [BT] will not count.) LED will flash while in Prime/Flush mode.
RK Reset Key (Resets faults. Press and hold for 3 seconds to clear the batch totalizer.) Push to toggle between flow rate and cycle rate. With runaway protection enabled, push to extend and retract the solenoid pin.
CF Cycle/Flow Rate
BT Batch Totalizer
GT Grand Totalizer
RT Runaway Toggle (enable/disable)
UT E1 Toggle
DT E2 Toggle
ST E5 Toggle

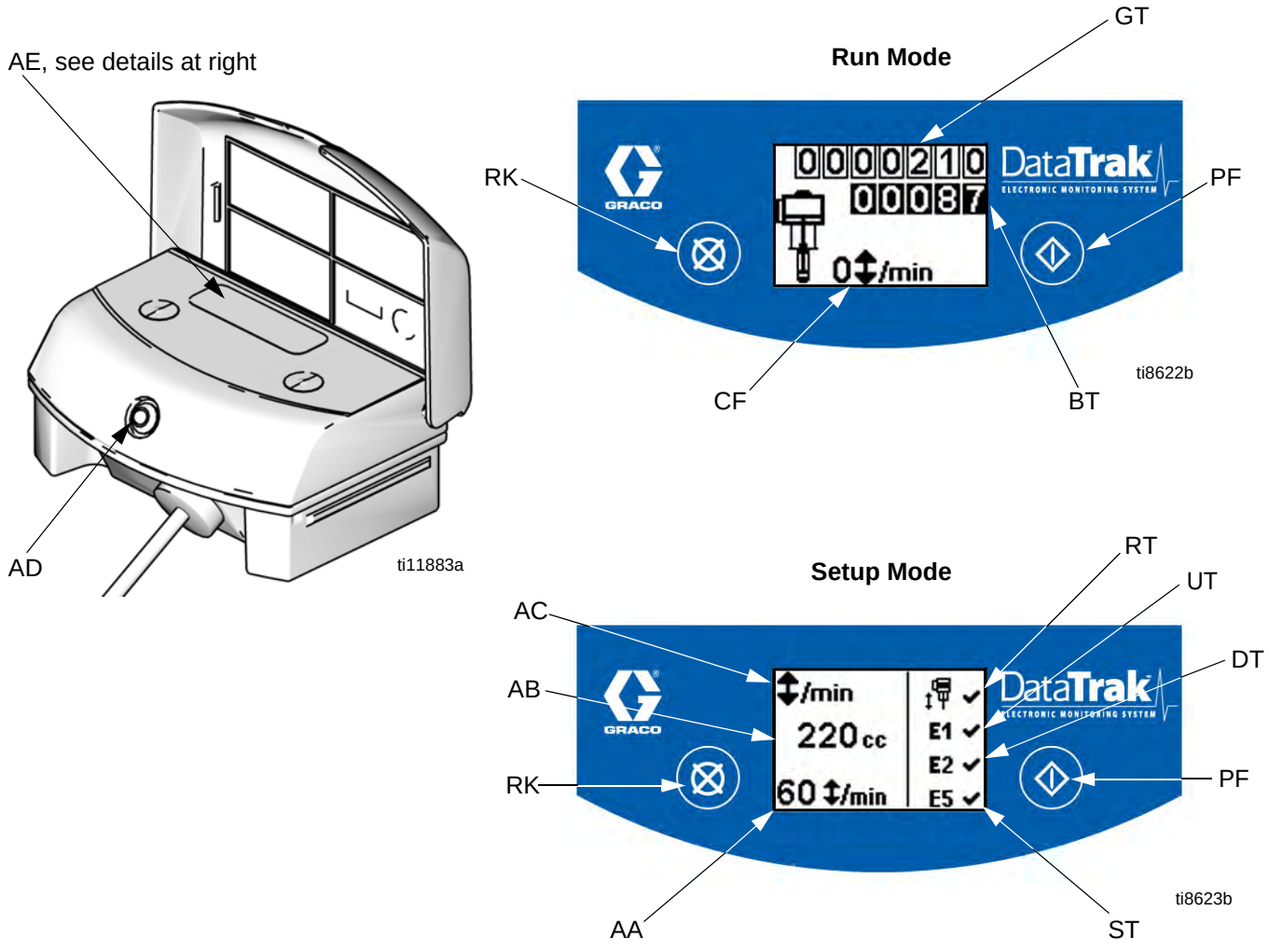


Fig. 1. DataTrak Controls and Indicators

DataTrak Operation

NOTE: The display (AE) will turn off after 1 minute to save battery life. Press any key to wake up the display.

NOTICE

To prevent damage to the softkey buttons, do not press the buttons with sharp objects such as pens, plastic cards, or fingernails.

Setup Mode

1. See Fig. 1. Press and hold ⏻ for 5 seconds until Setup menu appears.
2. To enter settings for runaway (if equipped), lower size, and flow rate units, and to enable runaway, E1, E2, and E5 error options, press ⊗ to change the value, then ⏻ to save the value and move the cursor to the next data field. See page 11 for a description of E1, E2, and E5 error codes.

NOTE: Graco recommends setting runaway (if equipped) to 60 . All DataTrak modules are shipped with runaway protection not enabled.

NOTE: When runaway, E1, E2, and E5 error options are enabled, a ✓ will appear on the setup screen. See Fig. 1.

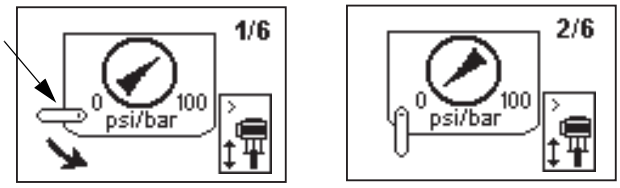
3. Move the cursor to the E5 error enable option field, then press ⏻ once more to exit Setup mode.

Run Mode

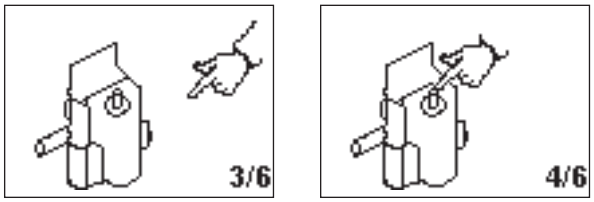
Runaway

NOTE: DataTrak is available with and without runaway protection. Packages with M02xxx air motors ship without a runaway solenoid. All other DataTrak packages are equipped with a runaway solenoid.

1. See Fig. 1. If pump runaway occurs, the runaway solenoid will actuate, stopping the pump. The LED (AD) will flash and the display (AE) will indicate a runaway condition (see Table 1 on page 11). The display will cycle through six instruction screens.
2. Runaway Screens 1 and 2: To reset the runaway solenoid, close the master air valve (E). Wait for air to completely bleed off the air motor.



3. Runaway Screens 3 and 4: After the air is bled off, push the solenoid release button (J) down to reset the air valve. The button will pop back up when the air valve is repressurized.



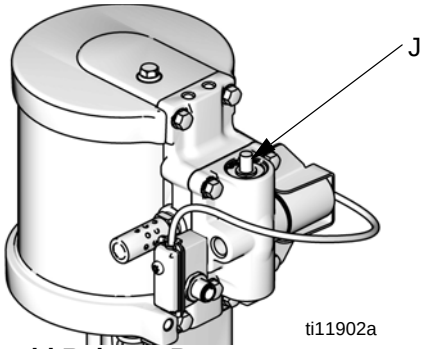
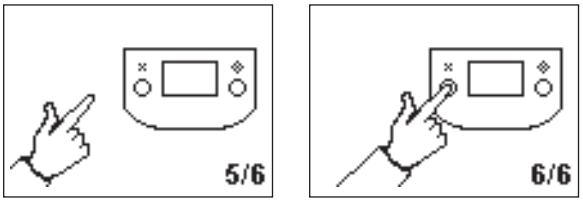


Fig. 2. Solenoid Release Button

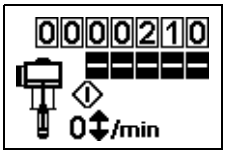
4. Runaway Screens 5 and 6: Press ⊗ to clear the diagnostic code and reset the runaway solenoid.



5. Open master air valve (E) to restart pump.

To disable runaway monitoring, go to setup mode and set runaway value to 0 (zero) or toggle (RT) off ⊗(see Fig. 1).

Prime/Flush

1. See Fig. 1. To enter Prime/Flush mode, press any key to wake up the display, then press ⏻. The Prime/Flush symbol will appear in the display and the LED will flash 

.
2. While in Prime/Flush mode, runaway protection is disabled and the batch totalizer (BT) will not count. The grand totalizer (GT) continues to count.
3. To exit Prime/Flush mode, press any key to wake up the display, then press ⏻. The Prime/Flush symbol will disappear from the display and the LED will stop flashing.

Counter/Totalizer

See Fig. 1. The last digit of the batch totalizer (BT) represents tenths of gallons or liters. To reset the totalizer, press any key to wake up the display, then press and hold ⊗ for 3 seconds.

- If AC is set to gallons or ounces, BT and GT display gallons.
- If AC is set to liters or cc, BT and GT display liters.
- If AC is set to cycles, BT and GT display cycles.

Press ⊗ to toggle between flow rate units and cycles. A letter under the BT display indicates that both BT and GT are displaying gallons (g) or liters (l). No letter means both BT and GT are displaying cycles.

Display

See Fig. 1. The display (AE) will turn off after 1 minute of inactivity in Run mode or 3 minutes in Setup mode. Press any key to wake up the display.

NOTE: DataTrak will continue to count cycles when display is off.

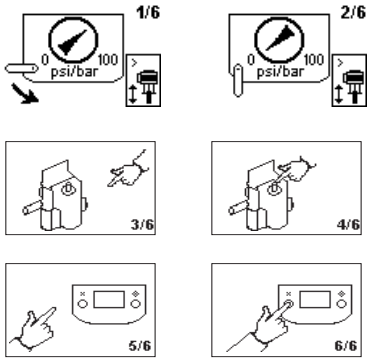
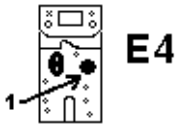
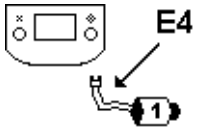
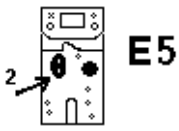
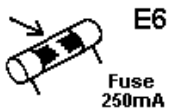
NOTE: The display (AE) may turn off if a high-level static discharge is applied to the DataTrak. Press any key to wake up the display.

Diagnostics

DataTrak can diagnose several problems with the pump. When the monitor detects a problem, the LED (AD, Fig. 1) will flash and a diagnostic code will appear on the display. See Table 1 on page 11.

To acknowledge the diagnosis and return to the normal operating screen, press ⊗ once to wake up the display, and once more to clear the diagnostic code screen.

Table 1: Diagnostic Codes

Symbol	Code	Code Name	Diagnosis	Cause
		Runaway (DataTrak only)	Pump running faster than set runaway limit.	• Increased air pressure. • Increased fluid output. • Exhausted fluid supply.
	E-1	Diving Up	Leak during upstroke.	Worn piston valve or packings.
	E-2	Diving Down	Leak during downstroke.	Worn intake valve.
	E-3	Low Battery	Battery voltage too low to stop runaway.	Low battery. Replace battery; see page 12.
	E-4	Service Component 1 (units with runaway protection only)	Problem with stopping runaway.	• Damaged solenoid. • Damaged valve carriage. • Runaway (RT, Fig. 1) protection may be enabled with pump that is not equipped with a runaway solenoid valve. Enter setup screen and disable runaway protection.
	E-4	Disconnected Solenoid (units with runaway protection only)	Solenoid is disconnected.	• Solenoid unplugged. • Damaged solenoid wires.
			Solenoid is not engaging piston cup (112).	• Bracket and solenoid not tight against air valve housing.
	E-5	Service Component 2	Problem with sensing valve movement.	• Sensors unplugged. • Sensors mounted incorrectly. • Damaged sensors. • Damaged valve carriage.
	E-6	Blown Fuse	Fuse is blown. Replace fuse; see page 13.	• Faulty solenoid or solenoid wiring. • Extreme temperatures (above 140°F [60°C]). • Runaway (RT, Fig. 1) protection may be enabled with pump that is not equipped with a runaway solenoid valve. Enter setup screen and disable runaway protection.

Replace DataTrak Battery or Fuse

To reduce the risk of fire and explosion, the battery and fuse must be replaced in a non-hazardous location.

Use only an approved replacement battery, shown in Table 1, and an approved fuse, shown in Table 2. Use of an unapproved battery or fuse will void Graco's warranty and Intertek and Ex approvals.

Replace Battery

1. Unscrew cable from the back of the reed switch assembly. See Fig. 3.
2. Remove the cable from the two cable clips.

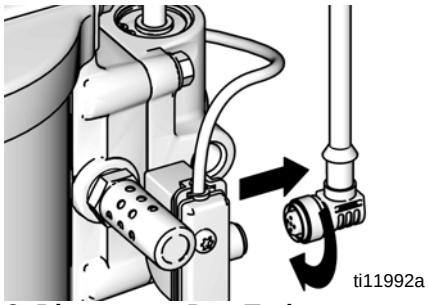


Fig. 3. Disconnect DataTrak

3. Remove DataTrak module from bracket. See Fig. 4. Take module and attached cable to a non-hazardous location.

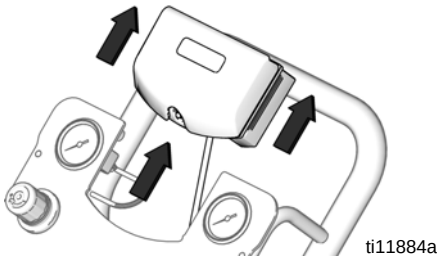


Fig. 4. Remove DataTrak from Murker Air Motor

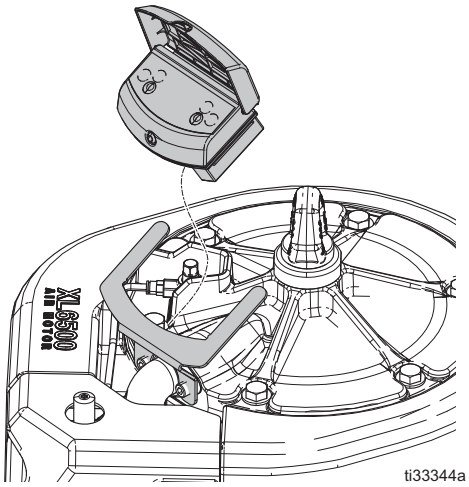


Fig. 5. Remove DataTrak from XL Air Motor

4. Remove two screws on back of module to access battery.

5. Disconnect the used battery and replace with an approved battery. See Table 1.

Table 1. Approved Batteries
Energizer alkaline # 522
Varta alkaline # 4922
Ultralife lithium # U9VL
Duracell alkaline # MN1604

Replace Fuse

1. Remove the screw, metal strap, and plastic holder.
2. Pull the fuse away from the board.
3. Replace with an approved fuse from Table 2.

Table 2. Approved Fuses		
DataTrak Part Number	**Series***	**Fuse Required**
289822	A or B	24C580
	C and later	24V216
All other part numbers	A	24C580
	B and later	24V216

* Fig. 6 shows where to find the Series letter.

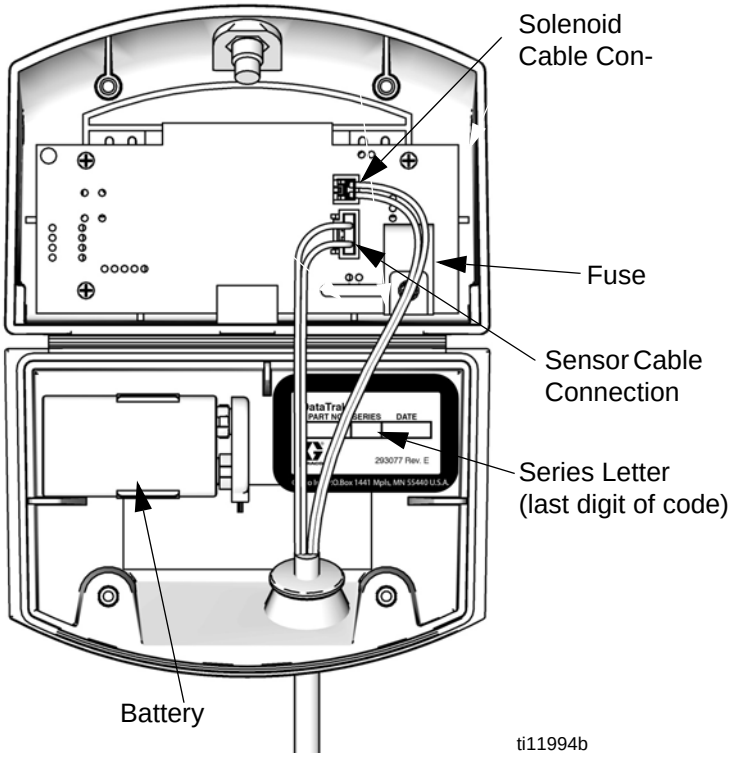
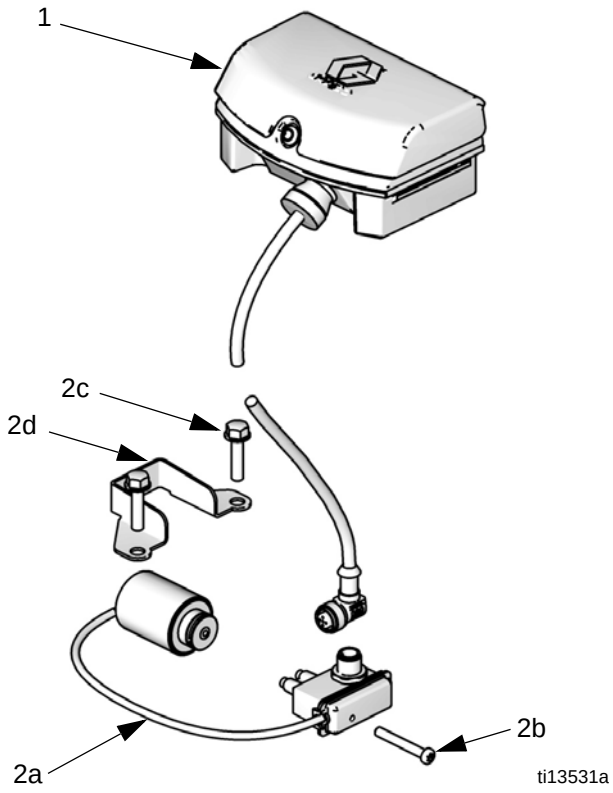


Fig. 6. DataTrak Battery and Fuse Location

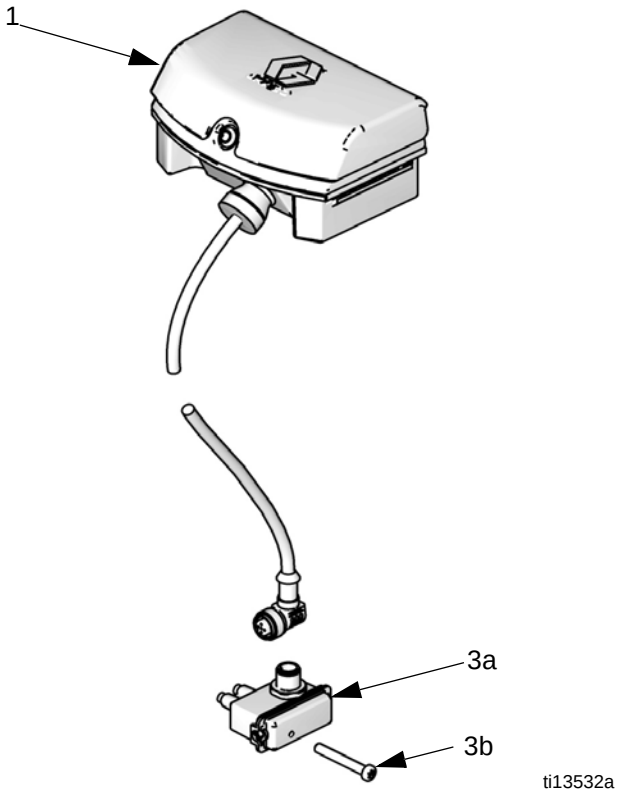
Parts

Models 24A575, 24A576 and 24X550



Ref. No.	Part No.	Description	Qty.
1	24B563	DATATRAK module (includes Part 4)	1
2	24B565 24B566	SOLENOID/REED SWITCH, kit (includes Parts 2a-2d) For Model 24A575 For Model 24A576 & 24X550	1
2a	-----	REED SWITCH with SOLENOID	1
2b	-----	SCREW, reed switch, 8-32 x 1.50	1
2c	-----	SCREW, solenoid, M6 x 25	2
2d	-----	BRACKET, solenoid	1
4	-----	CLAMP, hose (not shown) **Model 24A575** - order kit 24A544 for package of 10 **Model 24A576** - order kit 24A548 for package of 10	2
5▲	15V262	LABEL, warning (not shown)	1

Model 24A592 and 24X552



Ref. No.	Part No.	Description	Qty.
1	24B563	DATATRAK module (Includes Part 4)	1
3	24B564	REED SWITCH, assembly (includes Parts 3a and 3b)	1
3a	-----	REED SWITCH	
3b	-----	SCREW, reed switch, 8-32 x 1.50	1
4	-----	CLAMP, hose (not shown) **M02LN0 or M04LN0**- order kit 24A544 for package of 10 **M07LN0– M18LN0**- order kit 24A548 for package of 10	2
5▲	15V262	LABEL, warning (not shown)	1

▲ *Replacement Warning labels, signs, tags, and cards are available at no cost.*

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This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Original instructions. This manual contains English. MM 313541

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA
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