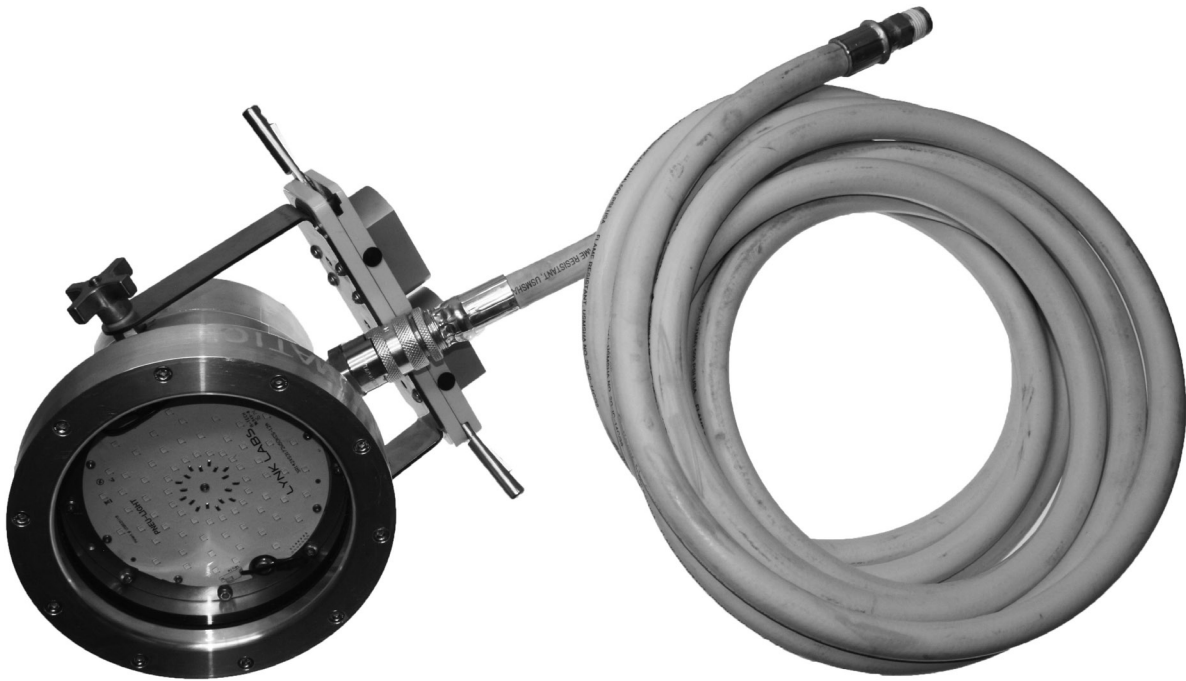


TEXAS PNEUMATIC TOOLS, INC.

Service, Operation AND Parts Manual

PNEU-LIGHT



S P E C I F I C A T I O N S

PART #	LENGTH	LENGTH w/BRACKET	WIDTH	WIDTH w/BRACKET	WEIGHT	MINIMUM HOSE SIZE
TX-PL5500	7.0" 178 mm	11.5" 292 mm	8.5" 216 mm	11.0" 279 mm	25.55 lbs 11.6 kg	1/2" 13 mm

~ Made in U.S.A. ~

www.airtools.com

Email: tptinfo@airtools.com

TEXAS

1-800-231-9740

254-587-2533 (Int'l calls)

NEVADA

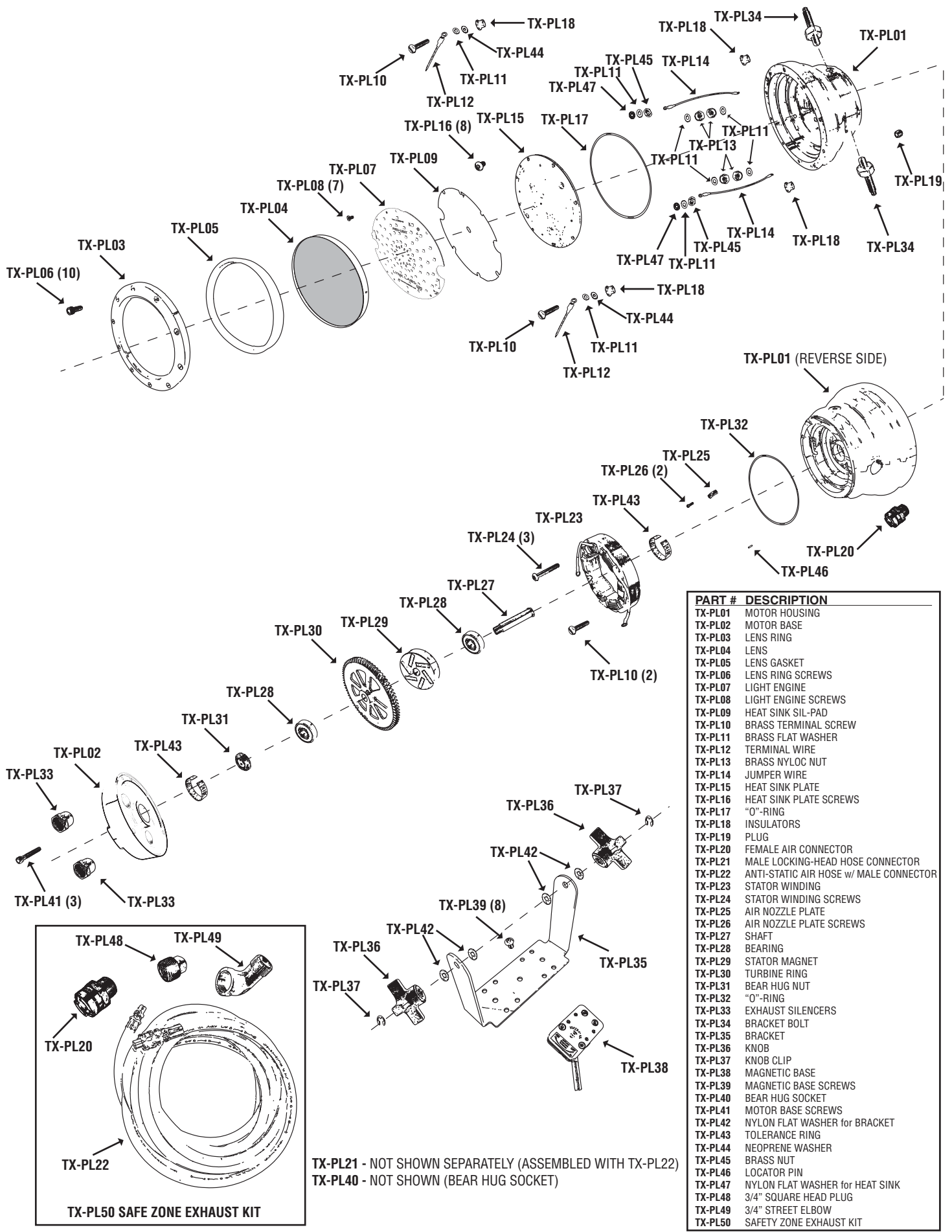
1-800-858-1222

VIRGINIA

1-800-626-1091

MICHIGAN

1-877-575-5733



PART #	DESCRIPTION
TX-PL01	MOTOR HOUSING
TX-PL02	MOTOR BASE
TX-PL03	LENS RING
TX-PL04	LENS
TX-PL05	LENS GASKET
TX-PL06	LENS RING SCREWS
TX-PL07	LIGHT ENGINE
TX-PL08	LIGHT ENGINE SCREWS
TX-PL09	HEAT SINK SIL-PAD
TX-PL10	BRASS TERMINAL SCREW
TX-PL11	BRASS FLAT WASHER
TX-PL12	TERMINAL WIRE
TX-PL13	BRASS NYLOC NUT
TX-PL14	JUMPER WIRE
TX-PL15	HEAT SINK PLATE
TX-PL16	HEAT SINK PLATE SCREWS
TX-PL17	"O"-RING
TX-PL18	INSULATORS
TX-PL19	PLUG
TX-PL20	FEMALE AIR CONNECTOR
TX-PL21	MALE LOCKING-HEAD HOSE CONNECTOR
TX-PL22	ANTI-STATIC AIR HOSE w/ MALE CONNECTOR
TX-PL23	STATOR WINDING
TX-PL24	STATOR WINDING SCREWS
TX-PL25	AIR NOZZLE PLATE
TX-PL26	AIR NOZZLE PLATE SCREWS
TX-PL27	SHAFT
TX-PL28	BEARING
TX-PL29	STATOR MAGNET
TX-PL30	TURBINE RING
TX-PL31	BEAR HUG NUT
TX-PL32	"O"-RING
TX-PL33	EXHAUST SILENCERS
TX-PL34	BRACKET BOLT
TX-PL35	BRACKET
TX-PL36	KNOB
TX-PL37	KNOB CLIP
TX-PL38	MAGNETIC BASE
TX-PL39	MAGNETIC BASE SCREWS
TX-PL40	BEAR HUG SOCKET
TX-PL41	MOTOR BASE SCREWS
TX-PL42	NYLON FLAT WASHER for BRACKET
TX-PL43	TOLERANCE RING
TX-PL44	NEOPRENE WASHER
TX-PL45	BRASS NUT
TX-PL46	LOCATOR PIN
TX-PL47	NYLON FLAT WASHER for HEAT SINK
TX-PL48	3/4" SQUARE HEAD PLUG
TX-PL49	3/4" STREET ELBOW
TX-PL50	SAFETY ZONE EXHAUST KIT

TX-PL21 - NOT SHOWN SEPARATELY (ASSEMBLED WITH TX-PL22)
 TX-PL40 - NOT SHOWN (BEAR HUG SOCKET)

TX-PL50 SAFE ZONE EXHAUST KIT

Service and Operations

Air Supply

For efficient performance, a regulated supply of clean, dry air is recommended. The Pneu-Light can operate from 40 to 120 psi (2.7 to 8.3 bar). No lubrication or filtration is required for operation. A regulator can be used to control pressure, but pressure can also be controlled via an in-line ball valve at the compressed air line source. If the compressor is pumping excessive water, a cooler or moisture separator (TX-MSS-400 or TX-MSS-800) should be attached to the compressor or air line. The air supply should be a minimum ½" ID hose with no restrictive couplings or fittings in the hose line. To conform with explosion proof guidelines, the air hose should be anti-static and flame retardant. TX-PL22 hose assembly is included with the unit when purchased new, and it conforms to these guidelines. **When used in dust, grain or powder atmospheres, the exhaust air must be piped to a safe, non-hazardous area.** See below for the correct way to exhaust air to a safe, non-hazardous area.

Preparing for Operation

The TX-PL5500 is an intrinsically safe, compressed air operated light. When operated at normal pressure (90 to 100 psi or 6.2 to 6.9 bar), it produces approximately 5,500 lumens, and a decibel level below 40db. It is important to use the supplied air hose (TX-PL22) when operating the light. The Female Air Connector (TX-PL20), included with the light, allows the air hose to be safely connected. The Male Connector (TX-PL21), assembled on the air hose, has a screw ring that keeps the connector from being accidentally disconnected from the Female Connector. The opposite end of the TX-PL22 has a 1/2" male pipe thread. Any air hose fitting can be attached to the 1/2" male pipe thread so the hose can be used with any air supply system.

A minimum air pressure of 60 psi (4.1 bar) is required to start the Pneu-Light. After starting, the pressure can be reduced to the minimum 40 psi rating. It should be noted that lower pressure ratings have lower lumen output. Higher pressure levels will produce higher lumen levels. The maximum operating pressure is 120 psi. (8.3 bar). Pressures above 120 psi will not yield higher lumen levels. The orifice of the Air Nozzle Plate (TX-PL25) acts as a regulator that tops out at 120 psi.

The Pneu-Light has a Bracket (TX-PL35) that allows the Motor Housing (TX-PL01) to swivel. Knobs (TX-PL36) on each side of the Bracket can be tightened to hold the Motor Housing in place. The Bracket also has a Magnetic Base (TX-PL38) that can be engaged to hold the unit in place or disengaged to remove the unit. The lever on the side of the Magnet Base is simply moved from right to left to engage the magnet and from left to right to disengage. A small tab on the bottom side of the lever has to be depressed before the lever can be disengaged.

The Pneu-Light must be completely assembled to operate. If the Lens (TX-PL04) is not completely bolted into position with the Lens Ring (TX-PL03), the Lens Ring Screws (TX-PL06) and Lens Gasket (TX-PL05), a bypass hole allows compressed air to escape and the Turbine (TX-PL30) will not have sufficient pressure and volume to operate. The LED Light Engine (TX-PL07) has more than a 10,000 hour life expectancy. In the event the Light Engine needs to be replaced, only the seven Light Engine Screws (TX-PL08) holding the Light Engine onto the Heat Sink Plate (TX-PL15) need to be removed. It is not necessary to remove the Heat Sink Plate from the Housing. The Heat Sink Plate Screws (TX-PL16) were installed with Loc-Tight to keep them from becoming loose during operation. The Heat Sink Plate also keeps moisture in the compressed air line from getting into the Light Engine area. If moisture is noted between the Heat Sink Plate and the Lens, the unit should be immediately removed from service and repaired. **Moisture in this area can damage the Light Engine.** The Terminal Wires (TX-PL12) on either side of the Light Engine can be disconnected from the Light Engine by pressing on the tab located at the rear of the terminal connector. Replace the Light Engine in the same orientation as removed. The Light Engine screw holes will not properly align if reversed. Note, there is a small dimple machined into the top of the Heat Sink Plate. The top of the Light Engine must be towards the top of the Heat Sink Plate for proper alignment.

Service and Operations

The Pneu-Light bearings are sealed which allow for long service life. To replace the Bearings (TX-PL28), remove the three Motor Base Screws (TX-PL41). The base can then be pulled from the housing. The assembly containing the Turbine (TX-PL30), Stator Magnet (TX-PL29), Bearings (TX-PL28), Shaft (TX-PL27) and Bear Hug Nut (TX-PL31) can be pulled from the housing. Once removed, the Shaft can be held in a vice using the flats on the shaft head. The Bear Hug Nut can be removed from the Shaft using a Bear Hug Socket (TX-PL40). Remove the Bearings, Turbine and Stator Magnet. When reassembling, please note the markings on the Turbine and Stator Magnet. The markings state “This Side Toward Magnet” and “This Side Toward Turbine”. The Magnet will be located closest to the Shaft head and the Turbine will be located closest to the Bear Hug Nut. Tighten the Bear Hug Nut on the Shaft. Ensure the assembly is tight, and place assembly into Motor Housing.

The Bearings fit into pockets in the Motor Housing and Motor Base. To keep the outer race of the Bearings from turning inside the Housing or Base, a Tolerance Ring (TX-PL43) is used. The Tolerance Rings should be replaced anytime Bearings are replaced. When reinstalling the Motor Base onto the Motor Housing, there is an Alignment Pin (TX-PL46) that goes into the hole in the Motor Base. The Alignment Pin ensures the Exhaust Silencers (TX-PL33) are located away from the Air Nozzle (TX-PL25) located inside the Motor Housing. Make sure the “O” Ring (TX-PL32) is seated into the groove on the Motor Housing. Reinstall the Motor Base Screws (TX-PL41) and tighten.

As previously noted, **it is required to exhaust the compressed air to a safe zone when being used in dust, grain or powder atmospheres. The exhaust must be to a safe, non-hazardous area.** To attach a hose (TX-PL22) to one of the exhaust ports located on the Motor Base, one of the Exhaust Silencers (TX-PL33) must be replaced with a ¾” Street Elbow (TX-PL49) and a Female Air Connector (TX-PL20). The Street Elbow must be screwed into the base before attaching the Female Air Connector. The other exhaust port must be plugged with a ¾” Square Head Plug (TX-PL48). The TX-PL22 will allow the exhaust to be located approximately 33 feet (10 meters) from the Pneu-Light. Additional hoses can be attached to extend the length. An Exhaust Muffler (ASQF-4F) can be attached to the hose end of the air hose to help difuse the compressed air.

The Pneu-Light can also be used under water. The Pneu-Light must be started above the water surface. To keep air bubbles from interfering with the light, an exhaust hose must be attached as described above. The Pneu-Light can be safely used to a depth of 100 feet (30 meters).

The Pneu-Light can also be safely used in wet environments. The temperature of the Pneu-Light will approximately equal the temperature of the compressed air being used. In tests with a cool compressed air supply, the Pneu-Light maintained a temperature consistent with the surrounding ambient air temperature.

When mounting the Pneu-Light overhead or on a wall, use a safety lanyard, (TX-SLC1) which is included when purchased new, to retain the unit if accidentally dislodged.

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 FUNCTIONAL SPECIFICATIONS

AIR PRESURE	VOLTS	AMPS	LUMENS	AIR COMSUMPTION	DECIBEL LEVEL
120 psi 8.3 Bar	13.1	5.0	6,025	13.1 cfm 371 l/min	60
110 psi 7.6 Bar	12.7	4,8	5,410	12.0 cfm 340 l/min	48
100 psi 6.9 Bar	12.3	4.3	4,725	11.5 cfm 326 l/min	<40
90 psi 6.2 Bar	11.8	3.7	4,165	9.8 cfm 278 l/min	<40
80 psi 5.5 Bar	11.3	3.1	3,417	8.5 cfm 241 l/min	<40
70 psi 4.8 Bar	10.7	2.5	2,889	6.8 cfm 193 l/min	<40
60 psi * 4.1 Bar	9.9	1.8	1,804	5.1 cfm 144 l/min	<40
50 psi 3.5 Bar	9.3	1.2	1,055	3.3 cfm 93 l/min	<40
40 psi 2.8 Bar	8.4	0.5	430	1.5 cfm 43 l/min	<40

* Minimum Pressure to Start

Features:

- ◆ Intrinsically Safe
- ◆ Compressed Air Driven
- ◆ LED Life Expectancy – 10,000 Hours
- ◆ T6 - Aircraft Grade Aluminum Housing
- ◆ Can Operate at a Large Range of Air Pressures
- ◆ Extremely Reliable Design
- ◆ Sealed Bearings For Extended Life
- ◆ Floodlight Pattern for Maximum Visibility
- ◆ Apex certification applied for