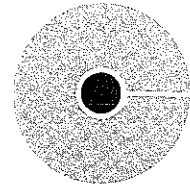
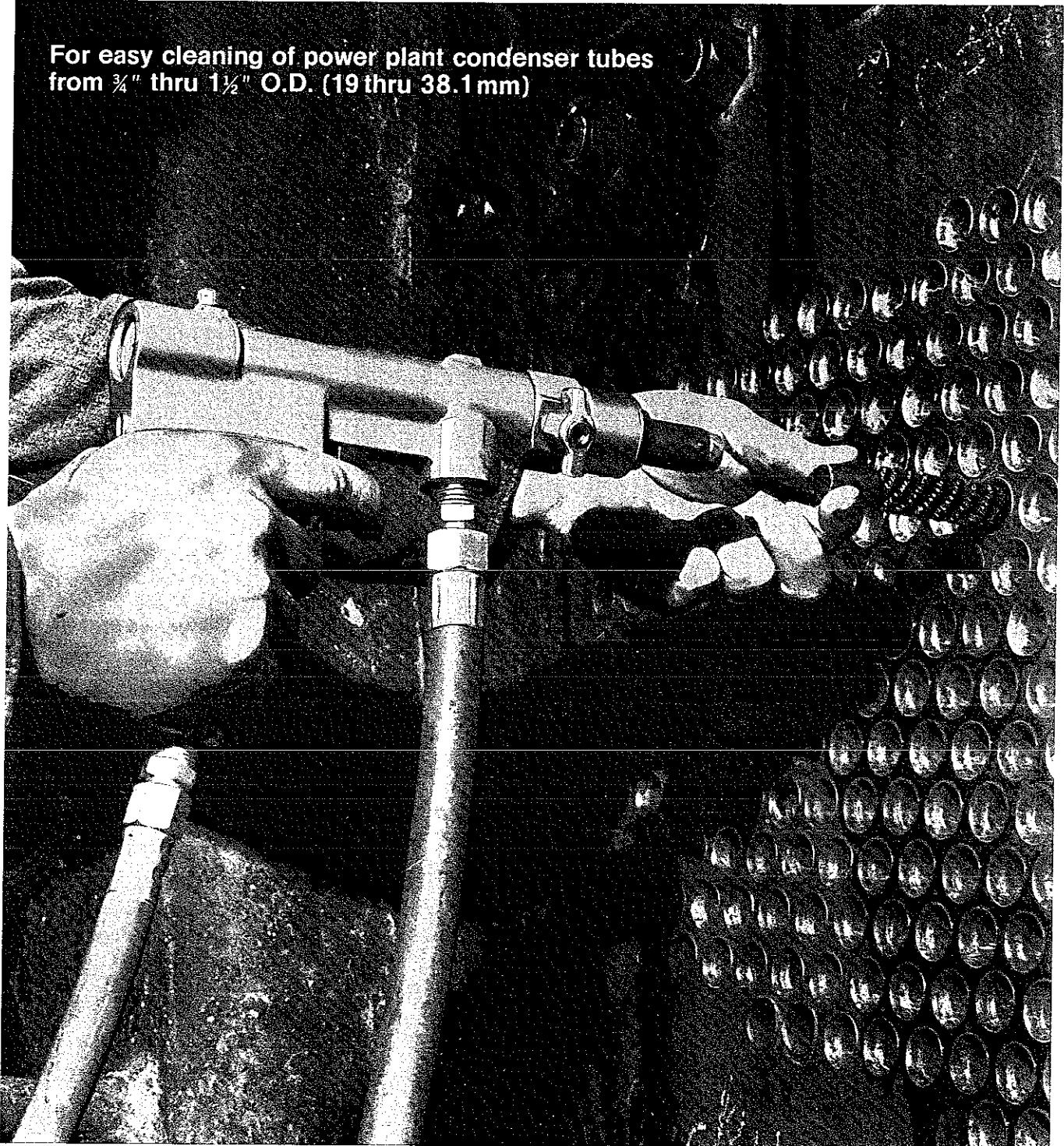


# Elliott Jumbo Jiffy Gun



Bulletin Y-85A

For easy cleaning of power plant condenser tubes  
from  $\frac{3}{4}$ " thru  $1\frac{1}{2}$ " O.D. (19 thru 38.1 mm)



# The Elliott Jumbo Jiffy Gun instantly cleans sludge, mud, algae

- Specifically designed for power plant condenser tubes.
- Works like the smaller Jiffy Gun but is more powerful and capable of cleaning longer tubes, larger diameters.

Pressure Relief Valve protects operator from back-firing when tube is totally-clogged

No mess, no splash Rubber collar expands when trigger is pulled, seals gun in tube

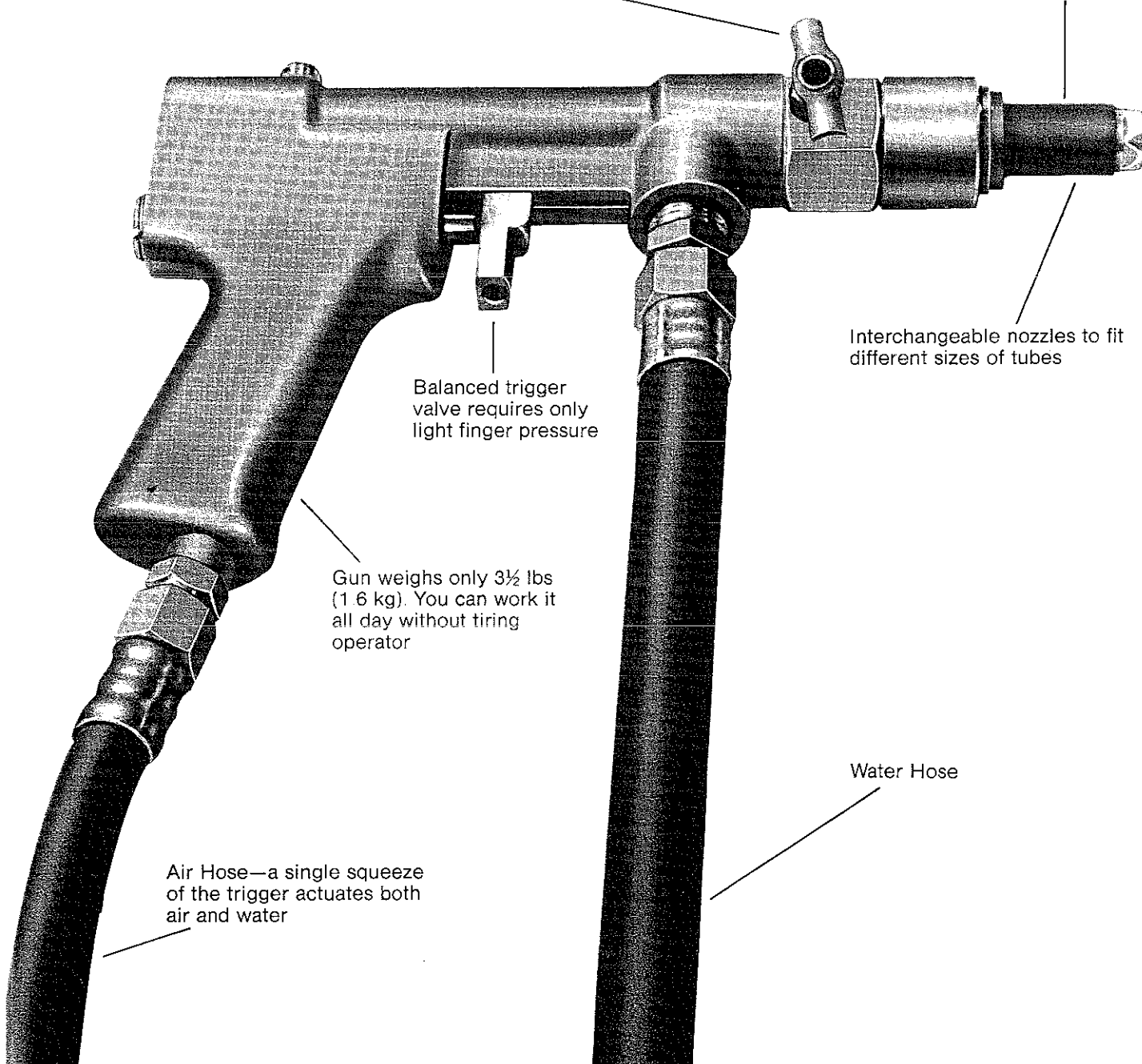
Interchangeable nozzles to fit different sizes of tubes

Balanced trigger valve requires only light finger pressure

Gun weighs only 3½ lbs (1.6 kg). You can work it all day without tiring operator

Water Hose

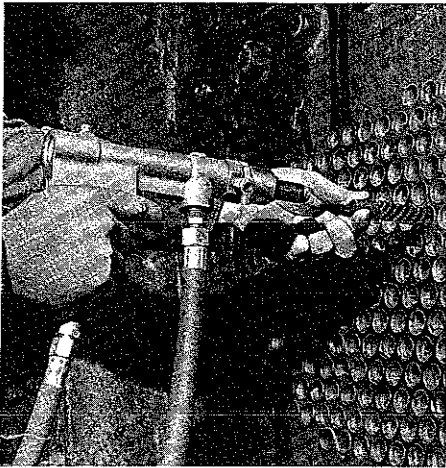
Air Hose—a single squeeze of the trigger actuates both air and water



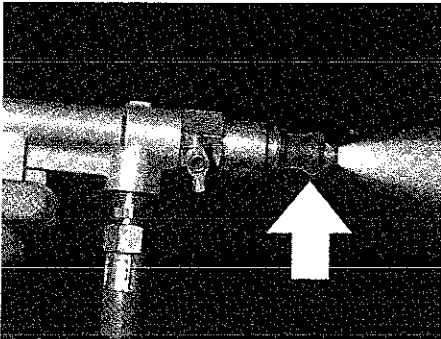
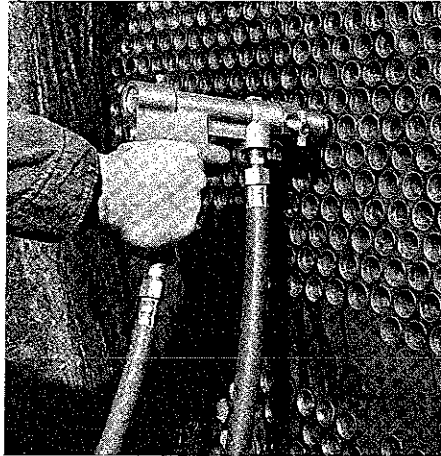
# So easy to use...yet so effective in restoring your condenser's efficiency

**1. Hang a soft backdrop** or tarpaulin behind the condenser tubes to catch brushes as they shoot out (For some applications, simple rubber plugs may be used instead of brushes )

**2. Load tubes** with reusable, spiral-wound, nylon brushes

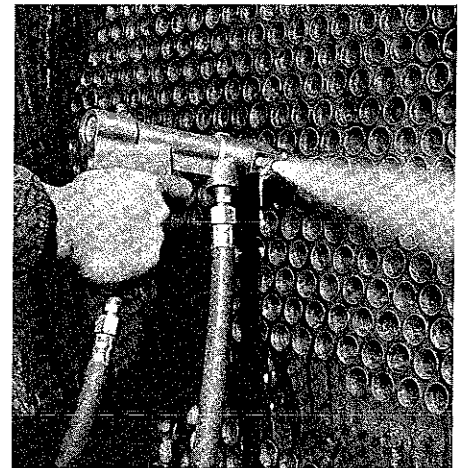


**3. Insert nozzle** into tube, squeeze trigger. Brush shoots through tube with a spinning, scouring action. Tube is clean—instantly



No effort is needed to hold nozzle in tube. When trigger is pulled, water pressure expands the rubber collar on the nozzle. This seals it like a cork in a bottle, eliminates back-splash

**4. Load remaining tubes** with brushes and repeat



What happens when a tube is totally clogged? Pressure relief valve releases the pressure, protects operator from back-firing brushes when gun is pulled away from tube

## SPECIFICATIONS

For tube lengths up to 60 feet (18.2 m)

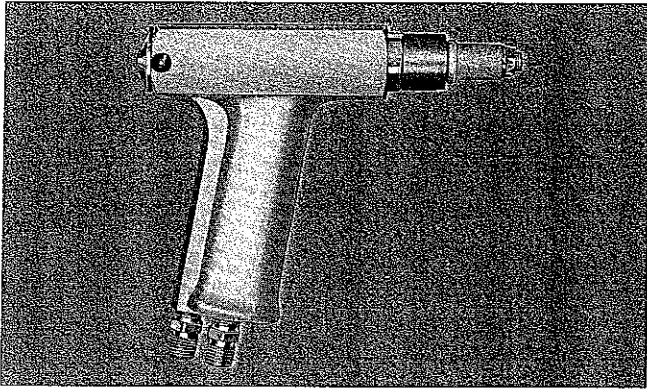
Water pressure . . . . . 40 psi (2.8 bar) or more

Air pressure . . . . . 40 psi (2.8 bar) or more

Tube Sizes . . . . . from 3/4 thru 1 1/2" O D (19 thru 38.1 mm)

Weight . . . . . only 3 1/2 lbs (1.6 kg)

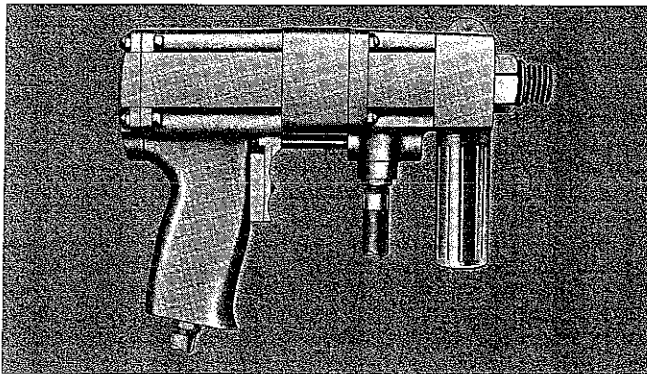
# Elliott condenser and heat exchanger tube cleaners



## THE JIFFY GUN ... FOR SOFT DEPOSITS

Identical in principle to the Jumbo Gun, but best suited for cleaning shorter tubes of smaller diameter. If water pressure is adequate, the Jiffy Gun can operate satisfactorily on water or air alone. Normal operation is on water plus air boost.

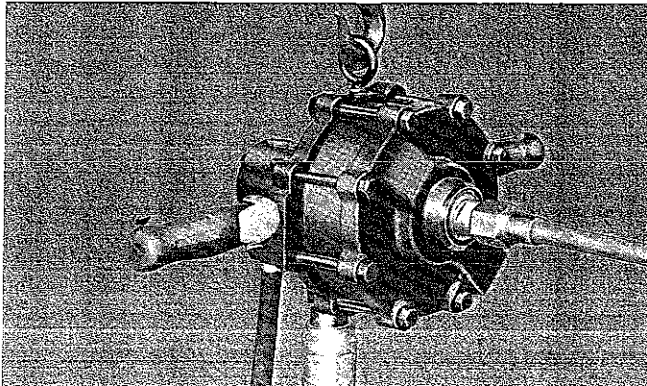
Water pressure . . . . . 40 psi (2.8 bar) and more  
 Air pressure . . . . . 25 psi (1.7 bar) and more  
 Tube sizes . . . . . from 3/8 to 1 1/4 inches (9.5 to 31.7 mm)  
 Weight . . . . . only 2 lbs. (0.9 kg)



## THE 5224 CLEANER ... FOR HARD DEPOSITS, SCALE, COKE

A light weight but powerful trigger-operated tube cleaner. Can drill through solid brick. Combined air-water feed—a single trigger initiates both water and air flow. Appropriate brushes and drills permit rapid removal of gummy, oily, or rubbery deposits, as well as hard scale or coke.

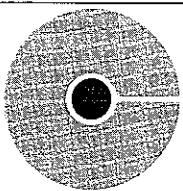
Air pressure . . . . . 40 cfm at 90 psi (19 dm<sup>3</sup>/s at 6.2 bar)  
 Water pressure . . . . . from 50 psi (3.4 bar)  
 Tube Sizes . . . . . through 2 inch (50 mm) I.D.  
 Weight . . . . . only 6 1/2 lbs. (3 kg)



## THE 5125 CLEANER ... FOR EXTRA HEAVY, HARD DEPOSITS

An extremely powerful, heavy duty, suspension-type cleaner. It also has a trigger operated control for both air and flushing water. The motor is normally suspended from an overhead support, permitting horizontal movement without changing vertical height. Only the severest cleaning problems require this oversize motor.

Air pressure . . . . . 175 cfm at 80-125 psi (83 dm<sup>3</sup>/s at 5.5-8.6 bar)  
 Water pressure . . . . . from 50 psi (3.4 bar)  
 Tube Sizes . . . . . through 2 inch (50 mm) I.D.  
 Weight . . . . . 35 lbs (15 kg)



Division of  
Carrier Corporation

**Elliott**  
Company

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 Telephone (513) 324-4191  
 TWX 810-452-2865

Elliott Overseas Company  
 P.O. Box 239 Springfield, Ohio 45501  
 Telephone (513) 324-4191  
 TWX 810-452-2865

For expert advice on any tube cleaning problem, call your Elliott specialist:



Form 330  
October 97

## OPERATING AND MAINTENANCE INSTRUCTIONS

### MODEL 537100C JUMBO JIFFY GUN CLEANERS

#### Tool Function:

The Elliott 537100C Jumbo Jiffy Gun has been developed for efficient cleaning of power plant condenser tube from 3/4" OD to 1-1/4" OD. Using a combination of air and water pressure, this gun "shoots" various cleaning devices through the tube to be cleaned. These brushes and/or scrubbers remove the deposits from the tube ID, which enables the condensing system to again operate at optimum efficiency.

Optimum operating pressures are 90 to 100 PSI air (40 PSI minimum) and 40 to 75 PSI water (40 PSI minimum). By regulating the air to water ratio, you will determine which combination works best for your application, depending on the amount of deposit, type of deposit, length of tube, and type of cleaning device used.

#### Set Up:

The complete cleaner consists of the cleaning gun, air hose whip, water hose whip, safety shield, nozzle, and nozzle adapter. Nozzles are available in either tapered or pressure activated styles. Refer to Section A7 data pages for these specifications. Tapered nozzles are designed to cover a range of tube ID's and to maximize the speed of the cleaning system. Pressure activated nozzles are sized to one specific tube size, and create a leak proof seal during operation.

Connect the air hose (3/8"NPS male thread) to the bottom of the pistol grip on the gun. The water hose (1/2" NPS male thread) is connected to the bottom of the barrel portion of the gun. The hose whips are then connected to supply lines. By connecting the supply lines to shut off valves, the air to water ratio can then be regulated. The nozzle adapter w/ petcock is threaded into the front of the gun. **Caution:** Position the petcock so that the opening is pointed away from the operator, preferably towards the ground. In the event of a plugged tube, the pressure will be relieved through this opening. A tapered nozzle can then be threaded directly into the nozzle adapter after the safety shield has been fitted over the male shank of the tapered nozzle. The bowl of the safety shield should be cupped towards the nozzle. If using the pressure activated nozzle, a shield adapter will also be required between the nozzle adapter and the nozzle.

#### Operation:

Load a series of tube cleaning devices into the tubes to be cleaned. Check to make sure the fit matches the manufacturer's specifications. If the fit is too loose, the tubes will not be cleaned properly. If the fit is too tight, the devices may become stuck in the tubes. Insert the nozzle into the tube end to be cleaned. Press the nozzle tight into the tube. The tapered nozzle will seal the tube end but the operator will be required to maintain pressure against the tube to overcome the reaction force of the air and water blast. The pressure activated nozzles will automatically expand into the tube when the trigger is activated, locking the nozzle into the tube.

Activate the gun by depressing the trigger. A blast of air and water will "shoot" the cleaning device through the tube. As long as the trigger is depressed, the air and water will continue to be shot through the tube. A one second to two second blast is sufficient. Release the trigger and move to the next tube. If the tube is blocked, release the pressure by slowly opening the petcock. The petcock must then be re-closed before continuing to the next tube.



## OPERATING AND MAINTENANCE INSTRUCTIONS

### MODEL 537100C JUMBO JIFFY GUN CLEANERS

#### Maintenance:

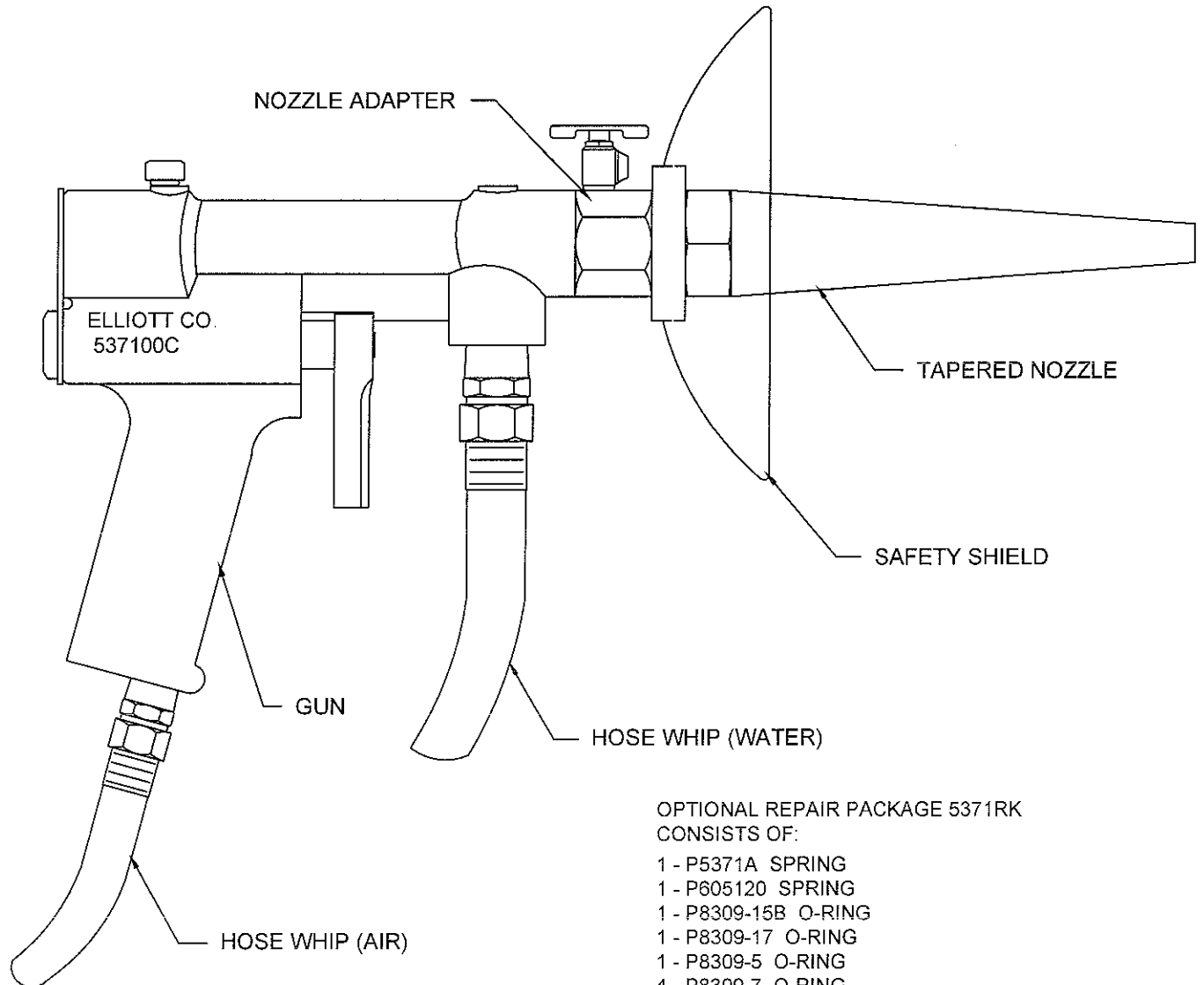
Refer to Section A7 data pages for component parts as required. Internal O-rings should be periodically replaced, especially if the gun has been stored for long periods of time. After use the gun should be operated with the water hose disconnected to remove any water from the system. This helps reduce the build up of mineral deposits from the water. If the gun is to be stored or unused for more than overnight, lubrication is recommended. Apply clean, lightweight oil or WD40 oil to all openings including the air and water ports. Re-connect the airline and activate the trigger a few times. This will distribute the oil through the gun. By activating the gun in open air before the next usage, this lubrication will be removed so as not to contaminate the tubes being cleaned.

#### Safety:

**Caution:** This gun uses compressed air and water to propel cleaning devices through condenser tubes at high velocities. Extreme caution must be exercised when using these tools. The following safety practices should always be utilized:

- OSHA approved safety devices must be worn to protect the operators eyes, ears, head, hands, feet, etc. Other persons assisting in the maintenance work being done to the vessel or being in the immediate area should also wear these devices.
- Never operate the Jumbo Jiffy Gun without the rear plate being in place. This safety device protects the operator in the event of retaining ring failure at the rear of the gun.
- Always make sure the vent plug and petcock openings are pointed away from the operator. Backpressure is relieved through these openings, and can occur unexpectedly.
- Never point or activate this gun at another person, or in the general direction of another person. Compressed air and water can be dangerous.
- Always install a flexible backstop to deflect the cleaning devices to the floor after they exit the end of the condenser tube under pressure. A heavy tarp or rubber mat works best. A rigid backdrop can deflect the cleaning devices causing injury, and it may actually damage the cleaning devices. Make sure that no one is near the end of the tubes being cleaned before you activate the gun in any tube. Rope, signs, and safety tape are all good devices to assure that no one is allowed to enter the "firing zone".

## 5371C JUMBO JIFFY GUN (Air and Water Operation)

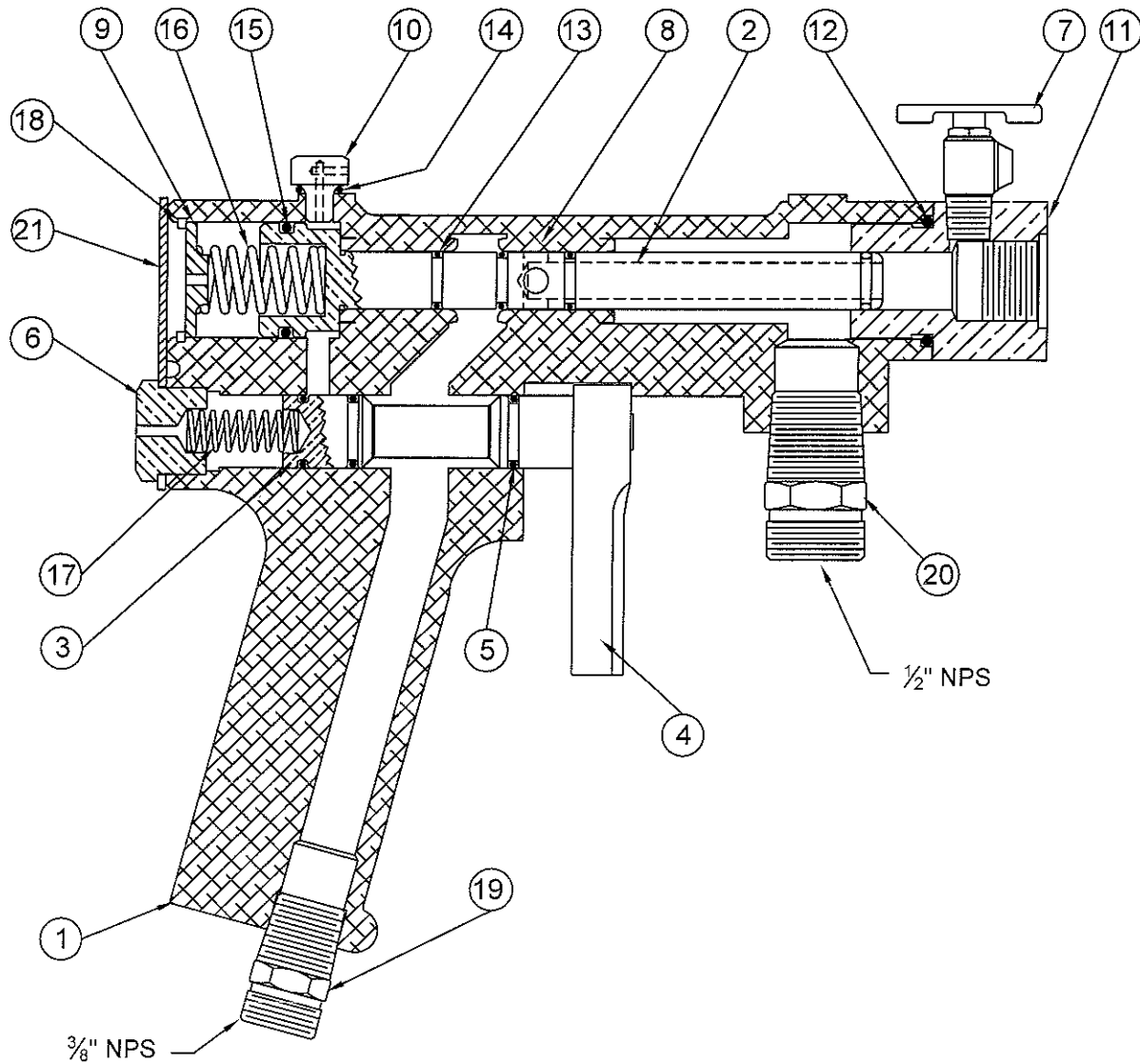


OPTIONAL REPAIR PACKAGE 5371RK  
CONSISTS OF:

- 1 - P5371A SPRING
- 1 - P605120 SPRING
- 1 - P8309-15B O-RING
- 1 - P8309-17 O-RING
- 1 - P8309-5 O-RING
- 4 - P8309-7 O-RING
- 3 - P8309-9A O-RING

PACKAGE CONSISTS OF THE FOLLOWING ITEMS:	5371CK1 (FOR 3/4" O D. TUBES)	5371CK2 (FOR 7/8" AND 1" O D TUBES)	5371CK3 (FOR 1-1/8" AND 1-1/4" O D TUBES)
	PART NUMBERS	PART NUMBERS	PART NUMBERS
GUN	537100C	537100C	537100C
TAPERED NOZZLE	5371-12	5371-1416	5371-1820
NOZZLE ADAPTER	5371NA	5371NA	5371NA
SAFETY SHIELD	P5371CL	P5371CL	P5371CL
HOSE WHIP (AIR)	P5371N	P5371N	P5371N
HOSE WHIP (WATER)	P5224-12	P5224-12	P5224-12
CARRYING BOX	153G	153G	153G

## 537100C JUMBO JIFFY GUN (Air and Water Operation)

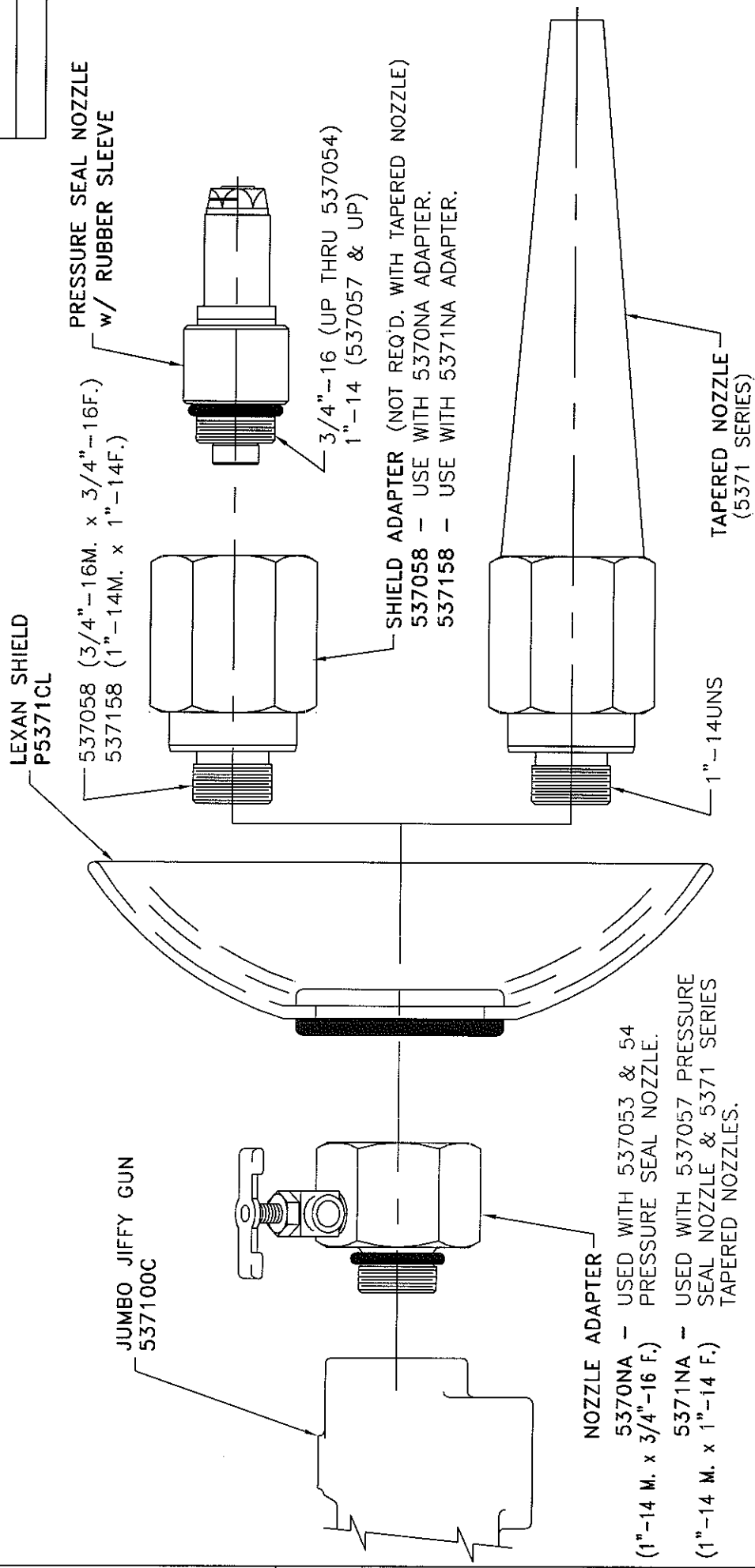


ITEM NO.	PART NAME	PART NUMBER	ITEM NO.	PART NAME	PART NUMBER
	Assembly	537100C	11	Nozzle Adapter	(See Chart)
1	Body *	537101C	12	"O" Ring	P8309-17
2	Valve Stem	537102	13	"O" Ring (4 Req)	P8309-7
3	Trigger Stem	537103B	14	"O" Ring	P8309-5
4	Trigger	537104A	15	"O" Ring	P8309-15B
5	"O" Ring (3 Req)	P8309-9A	16	Spring	P5371A
6	Trigger Cap	537106	17	Spring	P605120
7	Petcock	P6047A	18	Retainer Ring	P8368-100
8	Valve Sleeve	(See Note)	19	Adapter	P5371M
9	Vent Cap	537109	20	Adapter	P5224-13
10	Vent Plug	537110	21	Rear Plate	537112

\* Includes item 8 - not sold separately



SHEET NO.	1	OF	1
ENG. CHANGE NO.			



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NAME INSTRUCTIONS FOR ADAPTING LEXAN SHIELD & NOZZLES TO 537100C JUMBO JIFFY GUN	
DR. BY: R.T. (07-16-98)	PROJECT NO.
CKD. BY:	
SCALE = NONE	
TOOL NUMBER:	

