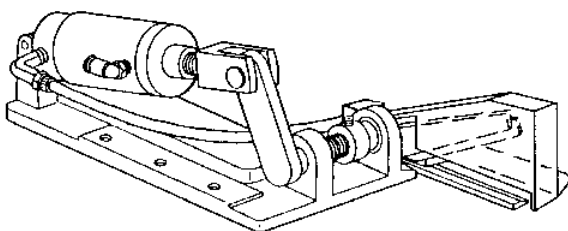


# CHAIN CUTTER MODELS

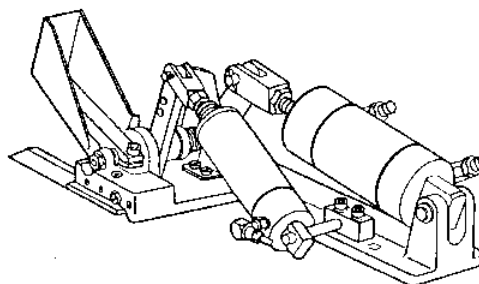
## ***205NSA-KS***

***AIR OPERATED WITH  
FIXED GUARD***



## ***305NSA-KS***

***AIR OPERATED WITH  
AUTOMATIC SAFETY GUARD***



## **WARNING!**

**TO PREVENT SERIOUS INJURY, THESE  
CUTTERS MUST ONLY BE OPERATED WITH  
THE SAFETY GUARDS INSTALLED AND  
PROPERLY ADJUSTED**

# SERVICE MANUAL

40-0151-01



Clinton Industries, Inc.  
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Carlstadt, N.J. 07072  
Phone: 201-935-4242  
Fax: 201-935-3615  
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E-mail: general@clintonind.com

## SECTION I

### A. GENERAL DESCRIPTION

The air operated tape cutter Model 205NSA is a heavy duty air driven knife system designed to separate garments sewn in a continuous chain of bindings or tapes.

### B. MAJOR COMPONENTS

1. The manually operated cutter consists of:
  - a. Cutter assembly
  - b. Oiler, filter, regulator, and gage assembly.
  - c. Knee operated air valve assembly.
2. For automatic operation, the following assemblies are required:
  - a. Electric Eye Model 3700
  - b. 4-Way solenoid air valve assembly.
  - c. Cutter assembly.

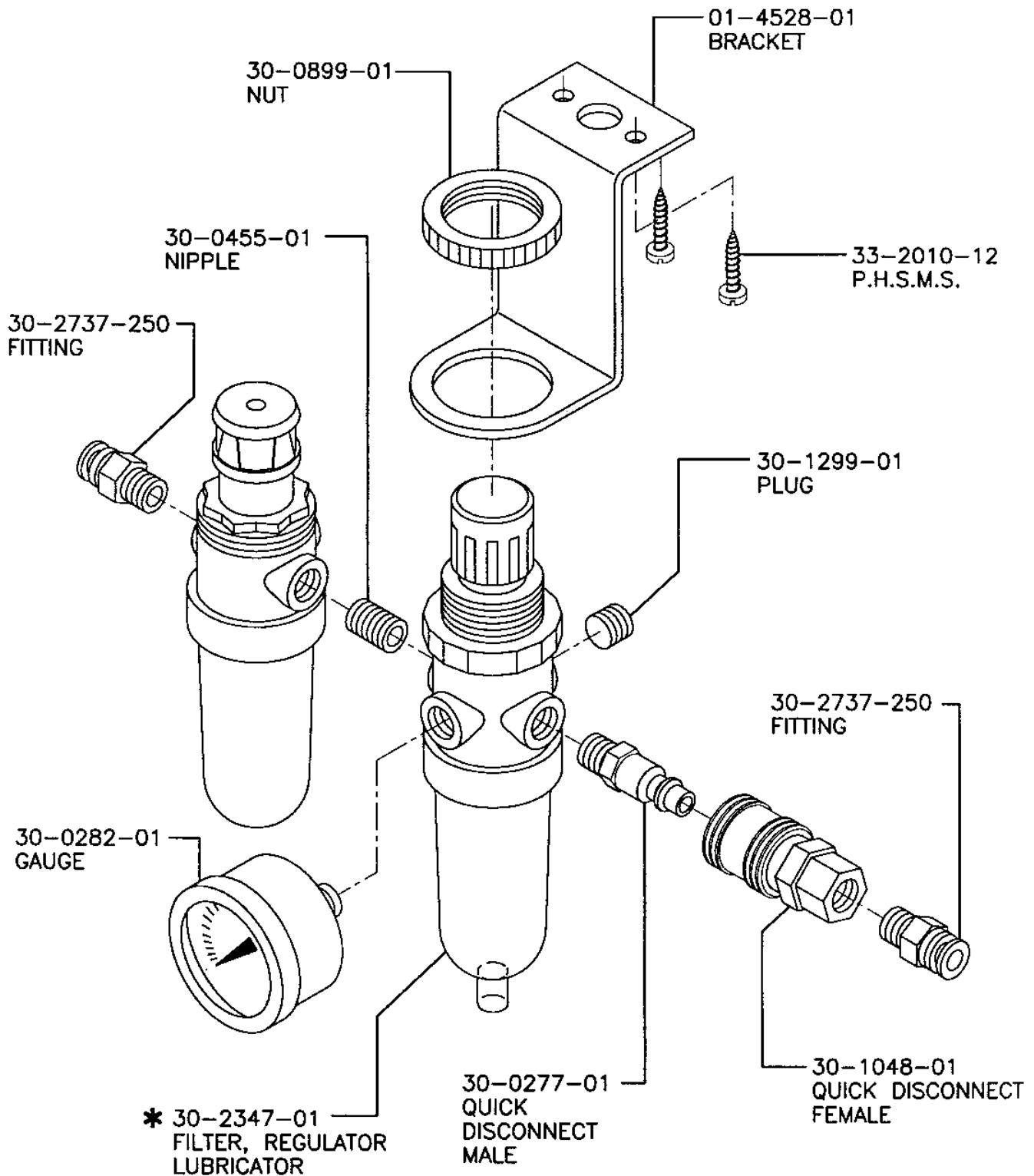
### C. INSTALLATION

**Warning: Disconnect air supply before making any adjustment to the cutter or its vicinity.**

1. See page 6, INS-1307 of typical installation.
2. To adjust angle of cutting blade, loosen screws 33-2210-10 (see page 6, INS-1307). Use screw (01-1515-01) to adjust degree of cutting blade angle; turn clockwise to decrease cutting angle, counterclockwise to increase cutting angle.
3. Adjust screw 33-2810-08 (see page 6, INS-1307) so that the movable blade will just miss the stationary blade at the beginning of its down stroke.
4. Cutter operates best with a minimum of spring tension. To adjust the blade cutting pressure, loosen locking collar #30-0317-01 (see page 6, INS-599) and move either to the left or right to increase cutting pressure.
5. Set operating pressure to approximately 50 PSI.
6. For installation of an electric eye see model 3700 manual.

# FILTER, REGULATOR, OILER & GAUGE ASSEMBLY

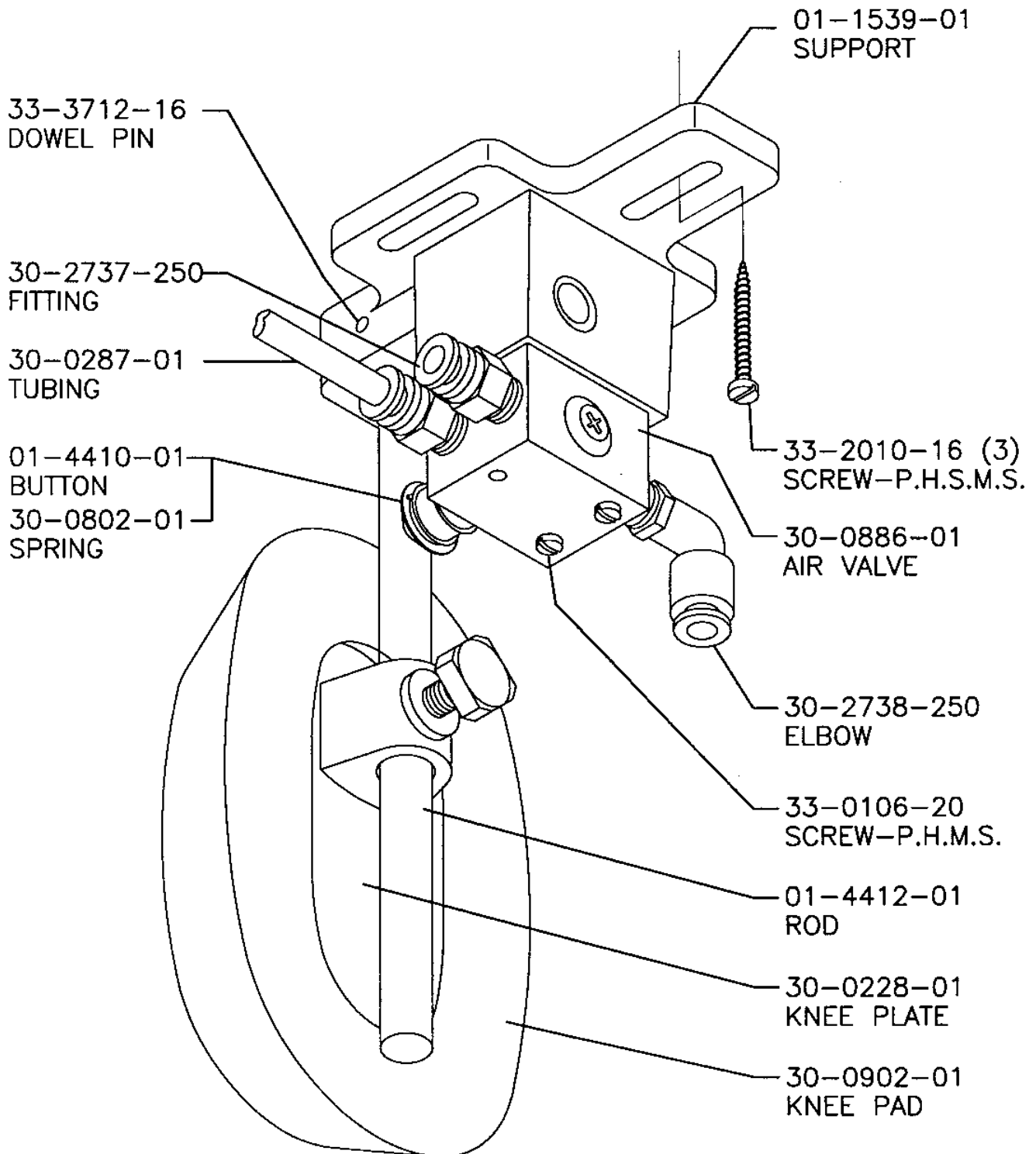
80-0181-01



\* NOTE: SEE INS-DRAWINGS 2100-1 AND  
2100-2 FOR SPARE PARTS

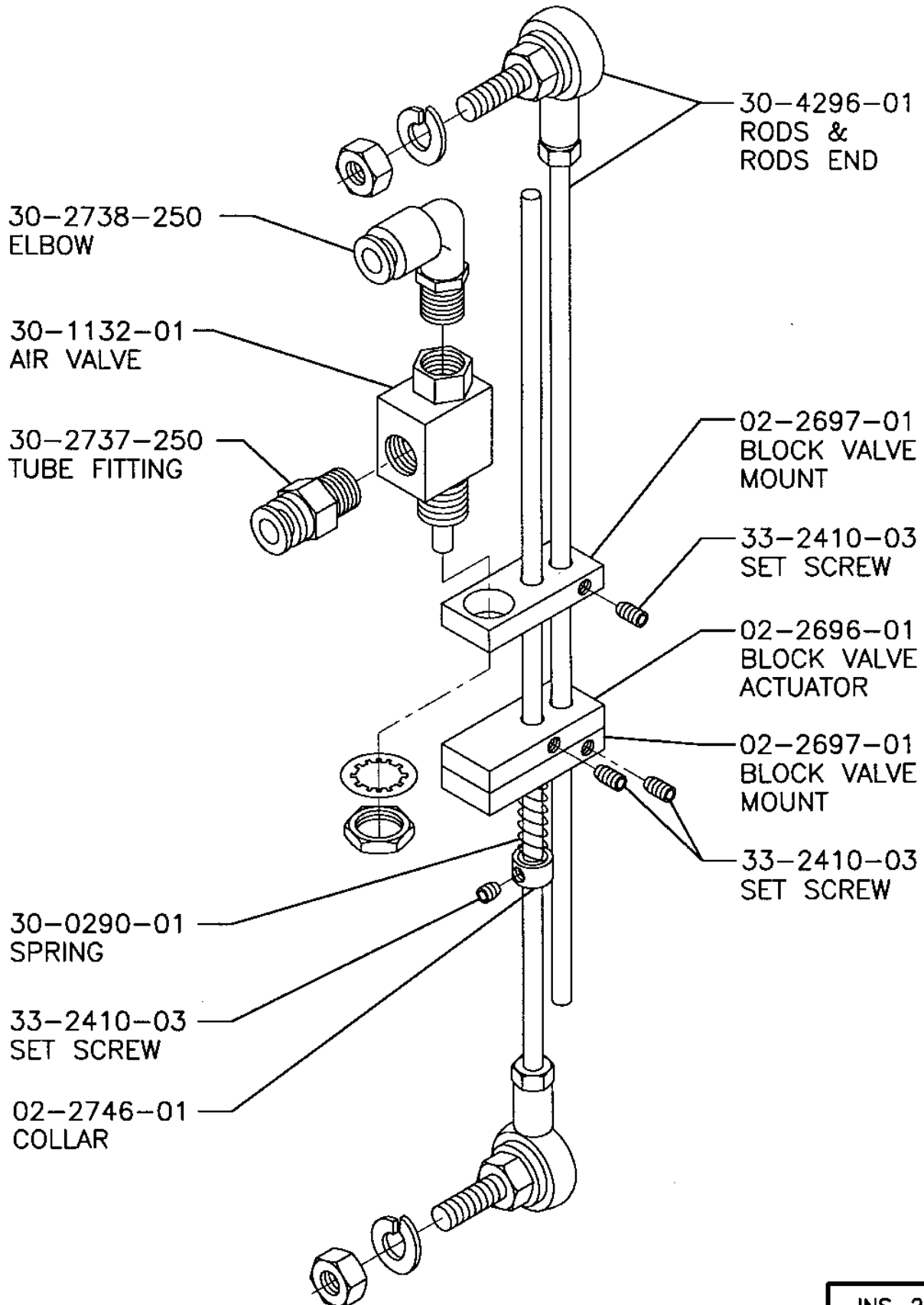
## 4 WAY AIR VALVE, KNEE OPERATED

80-0185-01



INS-619-1A

**TREADLE AIR SWITCH**  
 HEEL ACTION  
 80-0524-02

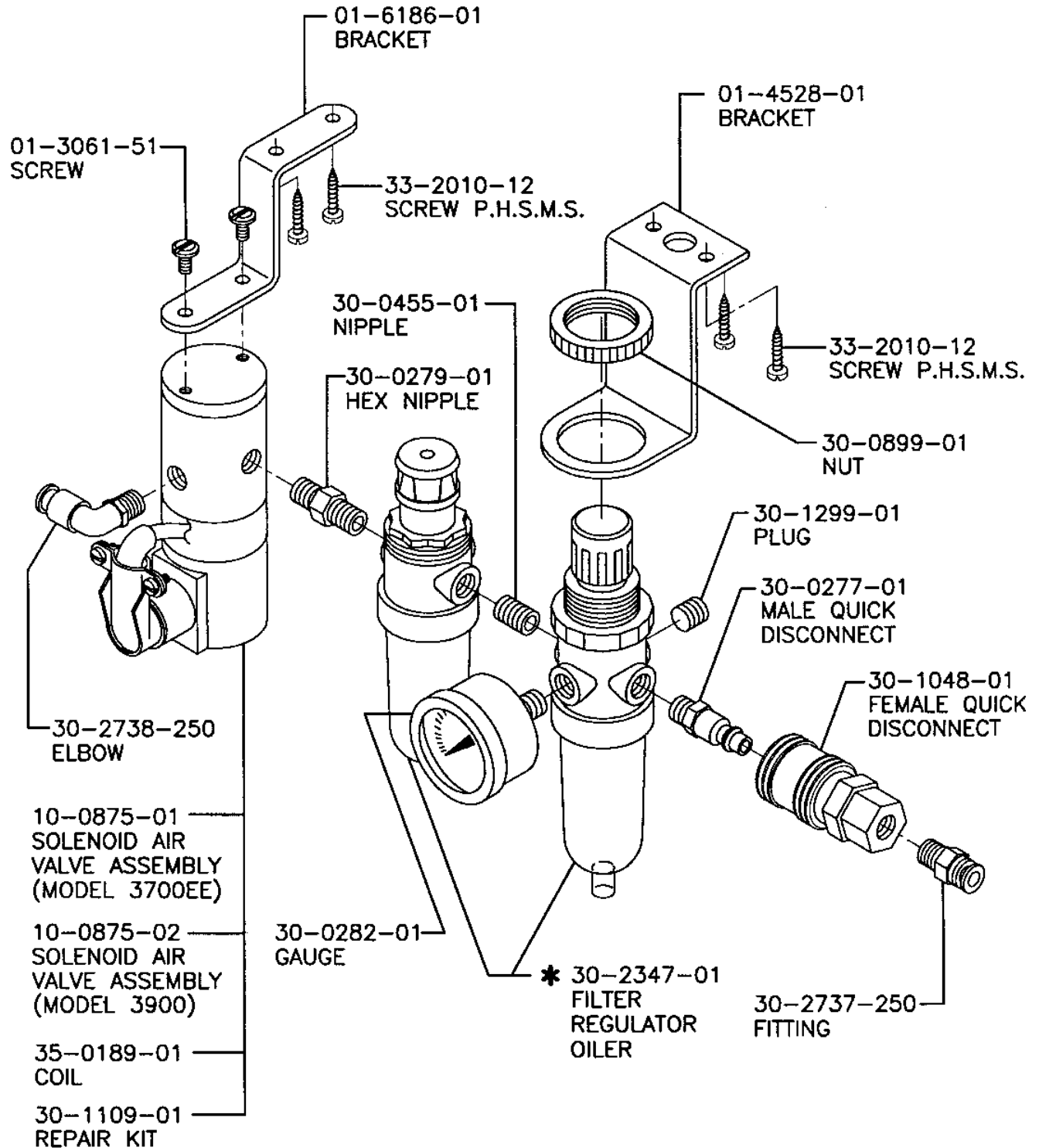


INS-2403B

# AIR CONTROL ASSEMBLY

MODEL 3700

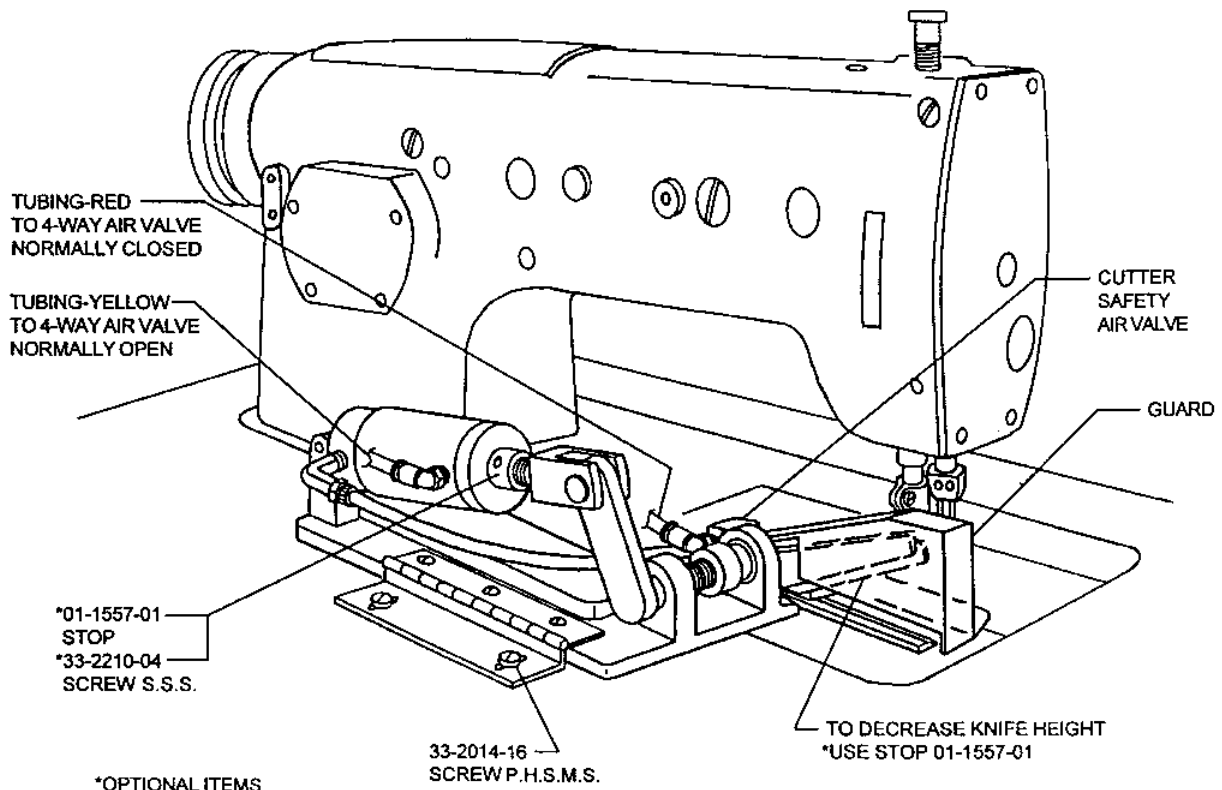
81-0412-01



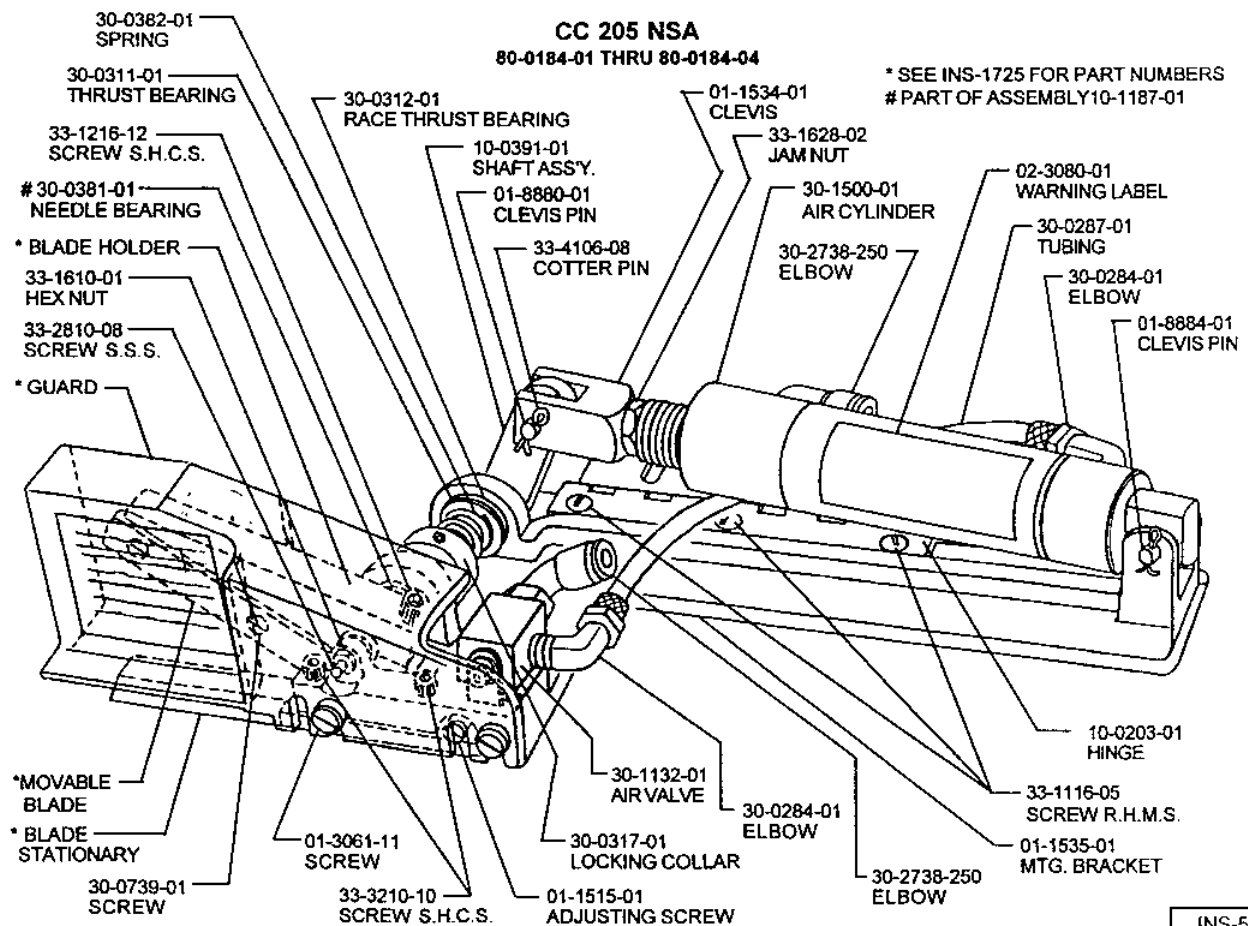
\* NOTE: SEE INS-DRAWINGS 2100-1 AND  
2100-2 FOR SPARE PARTS

INS-1475H

**SHEAR CHAIN CUTTER MODEL 205 NSA**  
**TYPICAL INSTALLATION**

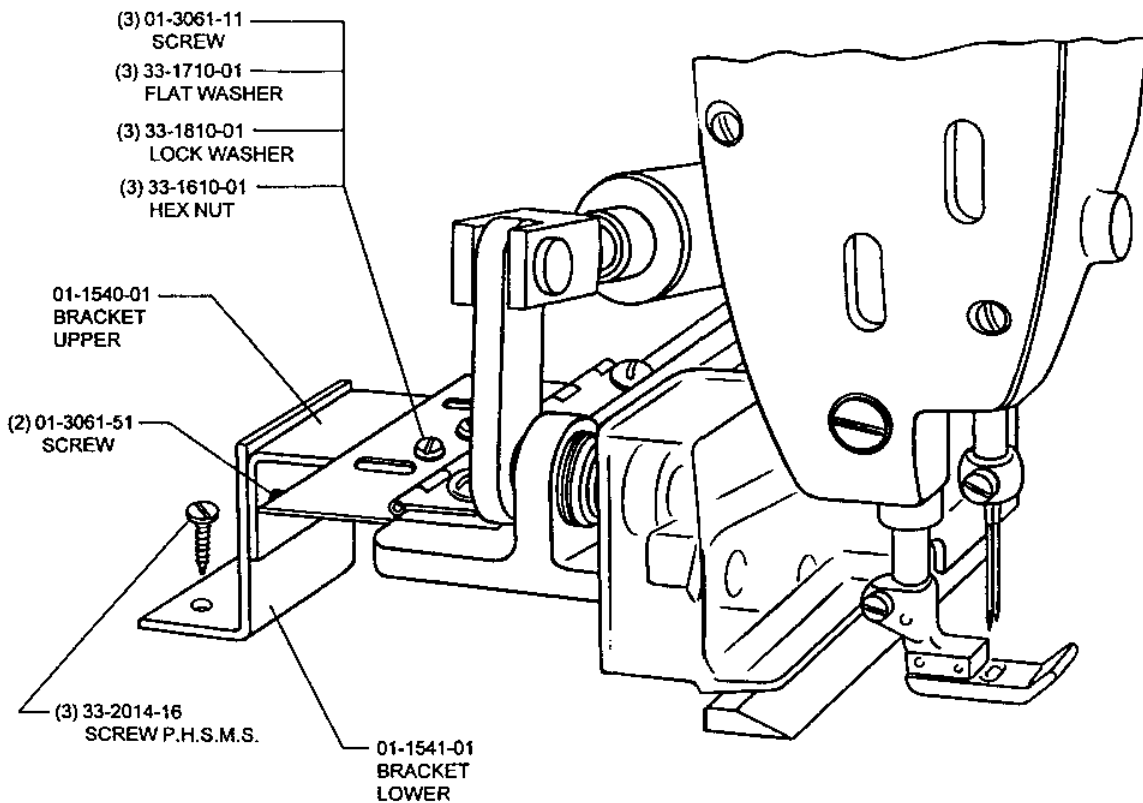


INS-1307D



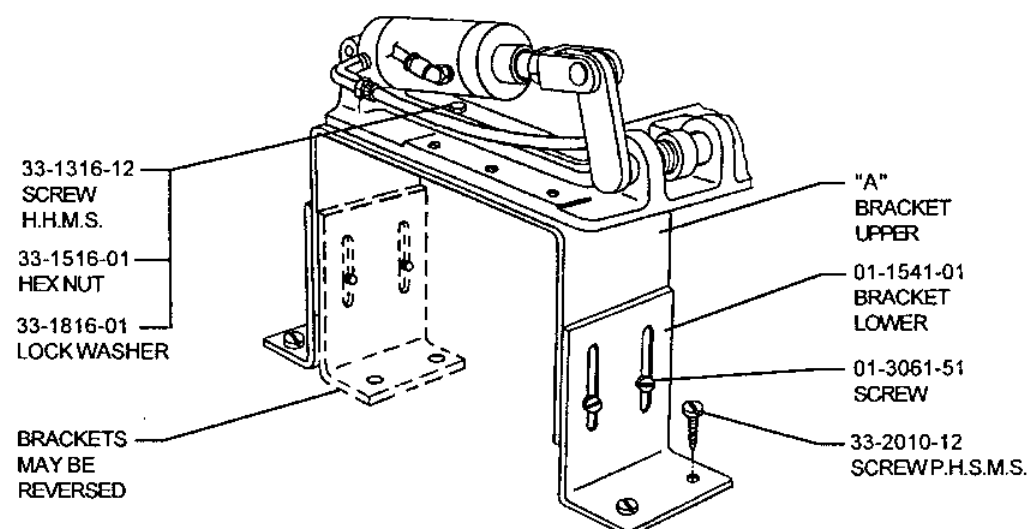
INS-599Q

**MODEL 205 CUTTER INSTALLATION  
RAISED MACHINE MOUNT  
10-0601-02**



INS-1022B

**BRACKET ASSEMBLY-MODEL 205NSA  
RAISED MACHINE MOUNT**



INS-1679C

10-0601-05	01-1554-03	US 50000 SERIES
10-0601-04	01-6374-01	MITSUBISHI CU-865
10-0601-03	01-1554-01	SINGER 212/BASE
ASSEMBLY NO.	"A" PART	MACHINE

MODEL 205NSA					
ASSEMBLY NO.	BLADE SIZE	BLADE HOLDER	BLADE MOVABLE	BLADE STATIONARY	GUARD
80-0184-01	2 1/2"	01-1506-01	01-1511-11	01-1536-11	10-1336-01
80-0184-02	3"	01-1506-01	01-1511-31	01-1536-21	10-1336-01
80-0184-03	4"	01-1506-01	01-1511-21	01-1536-31	02-3086-01
80-0184-04	1"	01-1506-02	01-1511-81	01-1536-41	01-6375-01

INS-1725B



**SECTION II****A. GENERAL DESCRIPTION**

The chain cutter Model 305NSA, equipped with an Automatic Safety Guard, is an air cutting system which enables the operator to cut heavy tape, binding and elastic. The cutting action is accomplished by the operator actuating a knee switch.

**B. MAJOR COMPONENTS**

1. Cutter and Guard assembly.
2. Knee operated air valve assembly.
3. Oiler, Filter, regulator and gage assembly.

**C. ADJUSTMENTS**

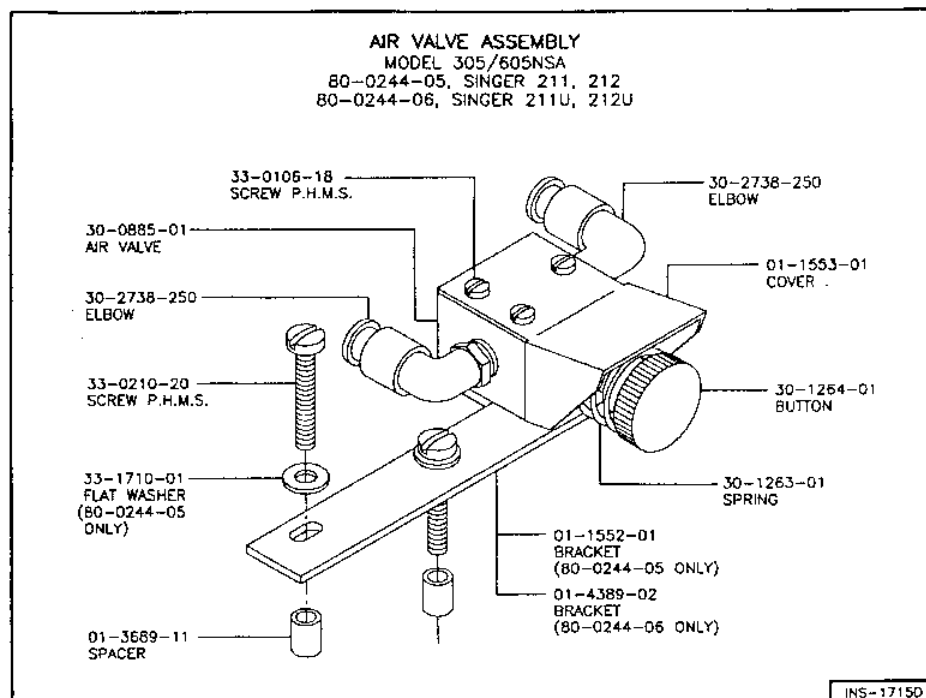
**Warning: Disconnect air supply before making any adjustments to the cutter or its vicinity.**

**1. KNIFE**

All knife adjustments such as blade angles and cutting pressures are the same as described on page 1.

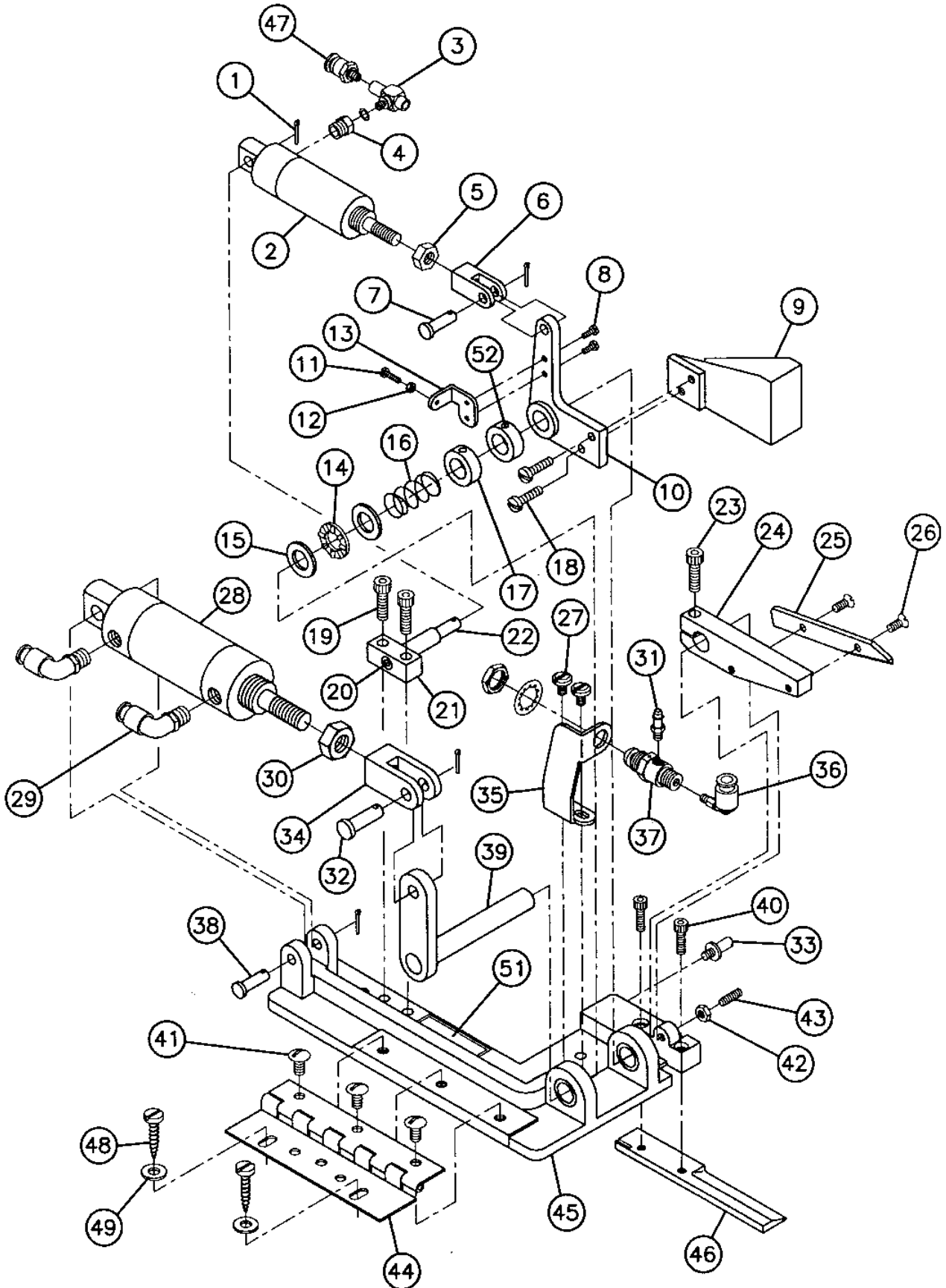
**2. GUARD**

- a. Disconnect air supply.
  - b. Loosen the 5/16-24 Hex nut and adjust clevis so that the guard down position is parallel to the stationary knife.
  - c. Loosen 4-40X1/2 screws and adjust air valve so that the roller lever is actuated in the last 1/8 of an inch guard travel.
  - d. Connect air and set primary regulator to read 50 PSI. Activate cutter and regulate the low pressure regulator (10-0529-02) until a smooth and complete travel is obtained for safety guard.
- Caution: When guard is lowered, knives will actuate.**
- e. Check guard setting by inserting a nonmetallic or wooden object of 1/4" thickness similar to that of a pencil between the guard and outside of the stationary knife. If properly set, the movable knife will not operate.



# SHEAR CUTTER ASSEMBLY

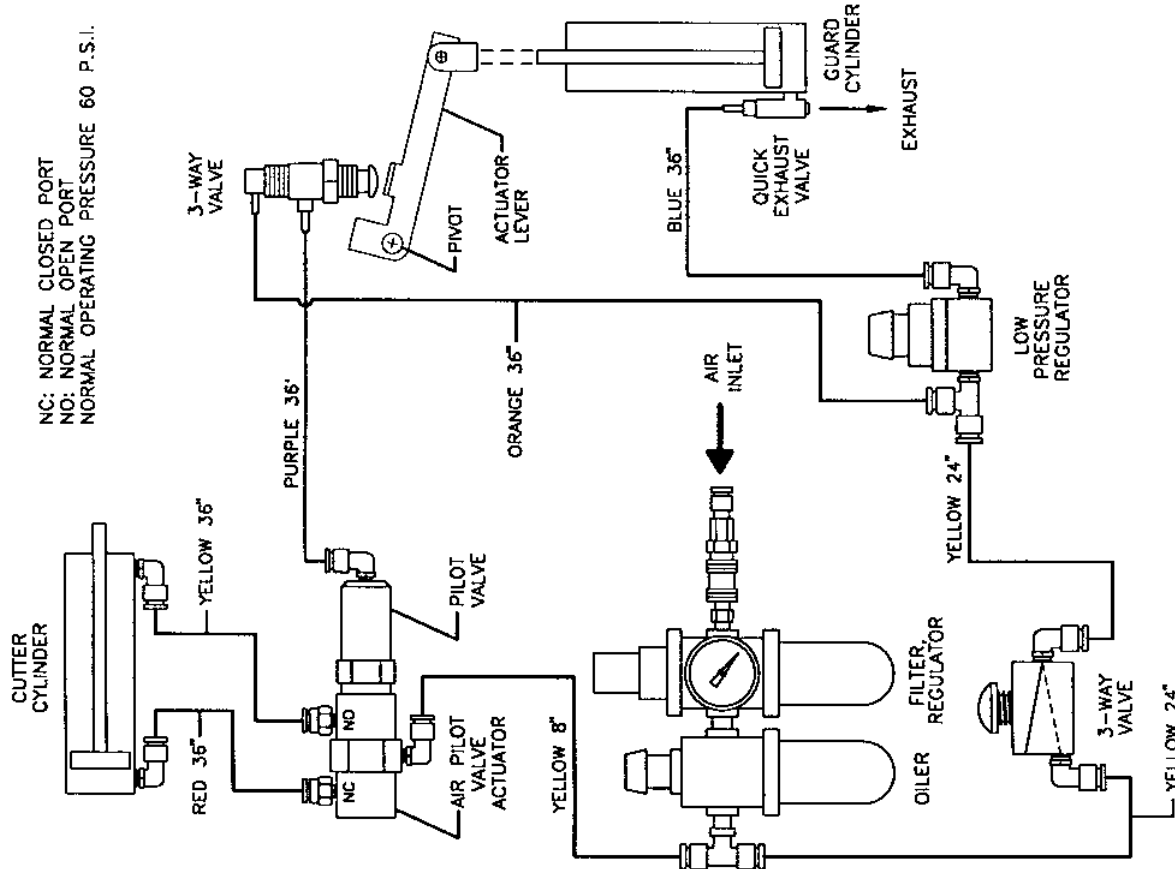
MODEL 305 NSA  
80-0325-01



**SHEAR CUTTER ASSEMBLY  
MODEL 305NSA  
80-0325-01**

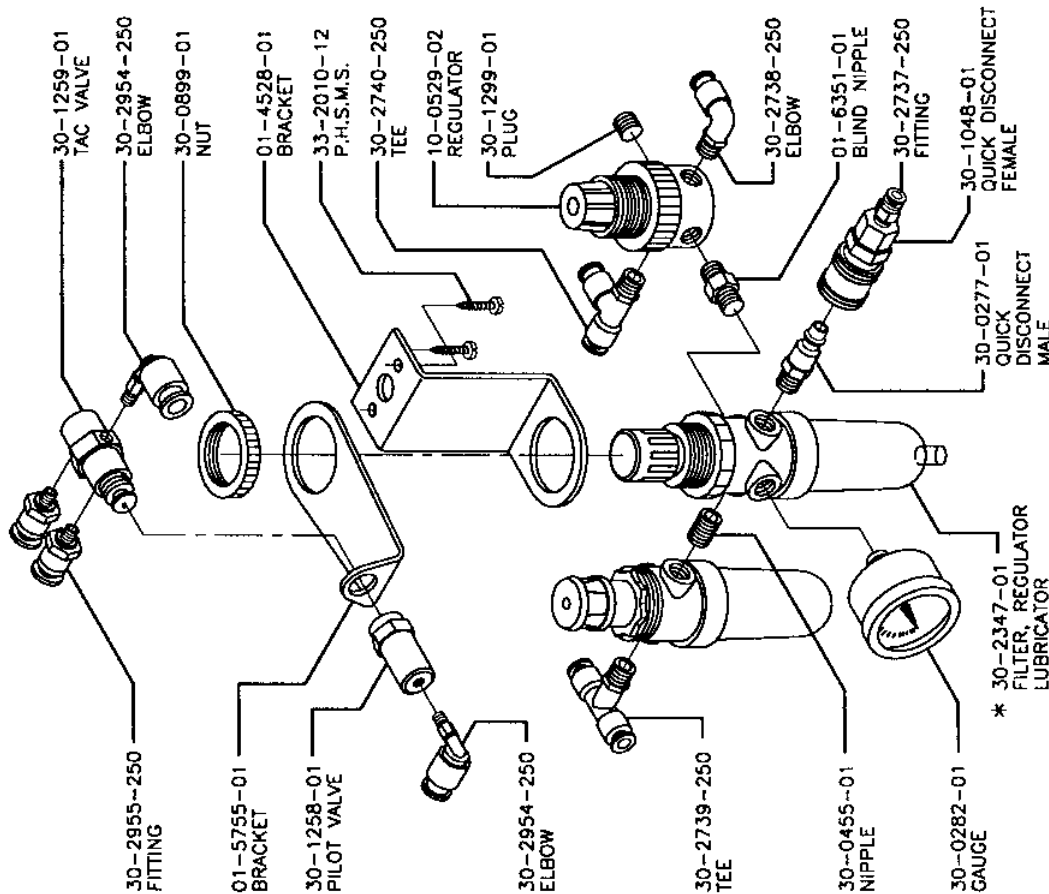
ITEM	DESCRIPTION	PART NO.	QUANTITY
1	CUTTER PIN	33-4106-08	4
2	AIR CYLINDER	01-7343-01	1
3	QUICK DUMP	30-1615-01	1
4	REDUCER	30-1104-01	1
5	HEX NUT	33-1620-01	1
6	CLEVIS	01-6349-01	1
7	CLEVIS PIN	30-2126-01	1
8	SCREW - P.H.M.S.	33-0104-05	2
9	GUARD ASS'Y	10-1011-01	1
10	ARM	10-0783-01	1
11	SCREW - P.H.M.S.	33-0104-08	1
12	HEX NUT	33-1504-01	1
13	ACTUATOR BRACKET	01-7345-01	1
14	NEEDLE THRUST BEARING	30-0311-01	1
15	NEEDLE THRUST BEARING RACE	30-0312-01	2
16	SPRING	30-0382-01	1
17	COLLAR	01-6319-01	2
18	SCREW - FIL.H.M.S.	01-3061-11	2
19	SCREW - S.H.C.S.	33-3116-12	2
20	SCREW - S.H.C.S.	33-3210-10	1
21	BLOCK	01-6324-01	1
22	PIVOT PIN	01-6348-02	1
23	SCREW - S.H.C.S.	33-3216-12	1
24	HOLDER BLADE	01-1506-01	1
25	MOVABLE BLADE	01-1511-11	1
26	SCREW	30-0739-01	2
27	SCREW FIL.H.M.S.	01-3061-51	2
28	AIR CYLINDER	30-1500-01	1
29	ELBOW	30-2738-250	2
30	HEX NUT	33-1628-02	1
31	FITTING - HOSE	01-4707-21	2
32	CLEVIS PIN	01-8880-01	1
33	ADJUSTING SCREW	01-1515-01	1
34	CLEVIS	01-1534-01	1
35	BRACKET	01-7344-01	1
36	ELBOW	01-4982-01	1
37	AIR VALVE	30-0821-01	1
38	PIN-AIR CYLINDER PIVOT	01-8884-01	1
39	SHAFT AND LINK ASSEMBLY	10-0391-01	1
40	SCREW - S.H.C.S.	33-3210-10	2
41	SCREW - R.H.M.S.	33-1116-05	3
42	HEX NUT	33-1610-01	1
43	SCREW - S.S.S.	33-2710-08	1
44	HINGE ASSEMBLY	10-0203-01	1
45	BASE ASSEMBLY	10-1187-01	1
46	STATIONARY BLADE	01-1536-11	1
47	SCREW	01-4923-01	1
48	SCREW - P.H.S.M.S.	33-2014-16	2
49	WASHER FLAT	33-1716-02	2
50	GASKET	30-1057-01	2
51	CLINTON I.D. LABEL	30-4452-41	1
52	SCREW - S.S.S.	33-2108-03	2

### AIR CIRCUIT MODEL 305NSA SHEAR CUTTER



INS-1530C

### AIR CONTROL ASSEMBLY DUAL REGULATOR MODEL 305NSA 80-0327-02



\* NOTE: SEE INS-DRAWINGS 2100-1 AND 2100-2 FOR SPARE PARTS

INS-1531D

## FILTER/REGULATOR

### OPERATION

AIR ENTERS THE INTEGRAL FILTER/REGULATOR UNIT AND IS DIRECTED DOWNWARD THROUGH A SET OF LOUVERS (10) TO IMPART A WHIRLING ACTION. THIS CENTRIFUGAL ACTION CAUSES LIQUID PARTICLES TO BE SEPARATED FROM THE AIR STREAM AND SETTLE TO THE BOTTOM OF THE BOWL. ACCUMULATED LIQUID IS DRAINED MANUALLY (15).

AIR THEN PASSES THROUGH THE SINTERED BRONZE FILTER ELEMENT (11) WHERE SMALLER SIZE FOREIGN PARTICLES ARE REMOVED.

THE CLEAN AIR PASSES THROUGH THE VALVE (5,6,7,8) OF THE REGULATOR AND IS CONTROLLED TO A PRESSURE, DETERMINED BY THE ADJUSTMENT OF THE REGULATOR. PRESSURE IS INCREASED BY ROTATING THE KNOB CLOCKWISE, OR DECREASED BY ROTATING THE KNOB COUNTERCLOCKWISE.

**CAUTION:** THIS MINIATURE INTEGRAL FILTER/REGULATOR SHOULD NOT BE USED IN APPLICATIONS WHICH MAY EXCEED 250 PSIG. DURING MAINTENANCE PERIODS, INSPECT AND CLEAN EACH PART CAREFULLY, USING ONLY CLEAR, WARM WATER OR KEROSENE. DO NOT USE SOLVENTS AS THE POLYCARBONATE BOWL MAY BE DAMAGED.

### MAINTENANCE:

**REGULATOR SECTION:** DISASSEMBLE THE REGULATOR SECTION AS FOLLOWS: TURN OFF AIR SUPPLY. TURN THE ADJUSTING KNOB COUNTERCLOCKWISE TO RELIEVE COMPRESSION ON THE REGULATING SPRING (2). UNSCREW THE BONNET (1), REMOVE THE REGULATING SPRING (2), AND PISTON ASSEMBLY (4). UNSCREW THE VALVE SEAT (5) WITH A 3/8" SOCKET AND REMOVE THE VALVE ASSEMBLY (7) AND VALVE SPRING (8).

CLEAN AND INSPECT EACH PART FOR WEAR OR DAMAGE. REPLACE IF NECESSARY.

**CAUTION:** WHEN REASSEMBLING, VALVE SEAT (5) SHOULD NOT BE TIGHTENED TO MORE THAN 4 TO 6 INCH POUND TORQUE. BONNET ASSEMBLY (1) SHOULD BE TIGHTENED 50 TO 60 INCH POUNDS TORQUE.

**MANUAL DRAIN FILTER SECTION:** TO SERVICE THE FILTER SECTION SHUT OFF THE AIR PRESSURE. UNSCREW BOWL ASSEMBLY (14) AND REMOVE "O" RING (9) UNSCREW STUD (13) AND FROM THE STUD REMOVE FILTER ELEMENT (11), LOUVER (10) AND GASKETS (12). THE FILTER ELEMENT SHOULD BE CLEANED PERIODICALLY WITH KEROSENE AND BLOWN OUT WITH COMPRESSED AIR.

AFTER CLEANING, INSPECT EACH PART CAREFULLY, REPLACE ANY DAMAGED PARTS. WHEN REASSEMBLING, TIGHTEN STUD (13) TO 5 TO 10 INCH POUNDS TORQUE.

## LUBRICATOR

**CAUTION:** THIS UNIT HAS A POLYCARBONATE BOWL.

1. BE SURE IT IS NOT MOUNTED WHERE TEMPERATURES OF 125° OR MORE WILL BE NEAR IT, OR ON A LINE WHERE AIR PRESSURE EXCEEDS 150PSI.
2. BEWARE OF CONDITIONS, FUMES AND FLUIDS THAT WILL HARM THE TRANSPARENT BOWL.
3. TO CLEAN BOWL, RINSE OR WIPE WITH A PETROLEUM SOLVENT ONLY, SUCH AS KEROSENE, OR HOUSEHOLD DISHWASHER DETERGENT.
4. DO NOT USE NEAR, OR CLEAN WITH SUCH MATERIALS AS ACETONE, ALCOHOL, BENZENE, DIOXANE, ETHYL ACETATE, LACQUER THINNER, TOLUENE, CHLORIDE, CARBON TETRACHLORIDE, ALKALIES, AMINES, ESTERS, KETONES AND AROMATIC HYDROCARBONS.
5. DO NOT INSTALL ON A COMPRESSED AIR LINE WHERE THE COMPRESSOR IS LUBRICATED WITH, OR THE AIR CONTAINS, A SYNTHETIC, FIRE-RESISTANT LUBRICANT.

**IMPORTANT: INSTALLATIONS INSTRUCTIONS FOR LUBRICATORS.**

### WHERE AND HOW TO INSTALL:

1. INSTALL AS CLOSE AS FEASIBLE TO EQUIPMENT TO BE LUBRICATED WITH AIR FLOWING IN AND OUT PORTS SO MARKED.
2. TO FILL THE LUBRICATOR, TURN OFF AIR PRESSURE, REMOVE BOWL AND FILL.
3. POUR IN ONLY CLEAN OIL. SAE 10 OR LIGHTER USUALLY IS BEST, NEVER USE ONE OF THE FOLLOWING OILS: CELLULUBE #150 AND #220, KANO KROIL, KEYSTONE PENETRATING OIL #2 OR PYDRAUL AC.
4. AS SOON AS AIR PRESSURE REBUILDS INSIDE THE BOWL, OIL WILL DRIP THROUGH THE SIGHT GAUGE. CONTROL THE RATE OF OIL ENTERING THE AIR STREAM BY TURNING THE ADJUSTMENT SCREW DOWN TO GIVE LESS OIL AND UP TO GIVE MORE OIL. THIS IS A UNIQUE LUBRICATOR. YOU ADJUST THIS TYPE SO THAT WHILE THE SMALLEST AMOUNT OF AIR IS FLOWING THROUGH IT YOU GET THE DESIRED AMOUNT OF OIL FOR THAT FLOW. THE MORE THE AIR FLOW INCREASES, THE MORE OIL YOU WILL NEED AND THE MORE YOU WILL GET AUTOMATICALLY.

### HOW TO MAINTAIN:

1. PERIODICALLY CLEAN ADJUSTING SCREW NEEDLE VALVE AND SEAT BY SWISHING A CLEANER AND BLOWING OFF WITH AIR.
2. DRAIN OFF ANY CONTAMINANTS OR WATER IF THEY SETTLE IN THE BOTTOM OF THE BOWL.

## FILTER, REGULATOR, AND LUBRICATOR 30-2347-01

