



**TORQUE ARM**

**TOOL SUPPORT SYSTEMS**

# **OPERATIONS MANUAL**

## **MODELS**

**STD-03110-OC**

**STD-15110-AC**

**PARA-03110-OC**

**PARA-15110-AC**

**ASA ENTERPRISE CORPORATION**

## INTRODUCTION



### CAUTION

Please read the following manual before assembling and operating your **Asst** - Torque Arm Tool Support Systems.

As in all cases, when electric or air lines come in close contact with moving parts or mechanisms, precautions should be taken by the person installing and operating the equipment that these cords or hoses do not become entangled or damaged by moving parts.

Proper attention will prevent possible hazard or injury.

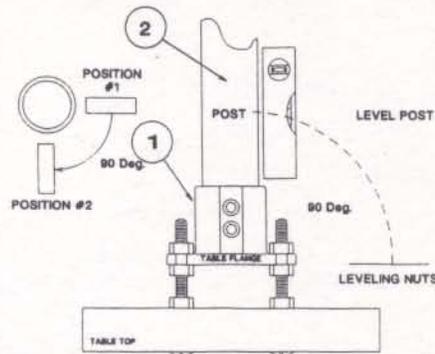
## RECOMMENDED TOOLS FOR ASSEMBLY AND ADJUSTMENTS

### [NOT SUPPLIED]

3/16" Allen Wrench.....	Used on item #1, 4, 52 & 54 [TABLE MOUNT 3/8 X 3/8 SET SCREW, 1/4-20 X 1-1/4" CAP SCREW, 3/8 X 1/2" SHOULDER BOLT, 3/8-16 X 3/4" DOG POINT SET SCREW]
9/64" Allen Wrench.....	Used on item #17 8-32 X 1" CAP SCREW
3/32" Allen Wrench.....	Used on item #47 [8-32 X 1/2" BUTTON HEAD SCREW]
3/4" Open End Wrenck.....	Used on item #7 [1/2-13 LOCK NUT]
9/16" Open End Wrench.....	Used on item #43 & 53 [3/8-16 NUTS]

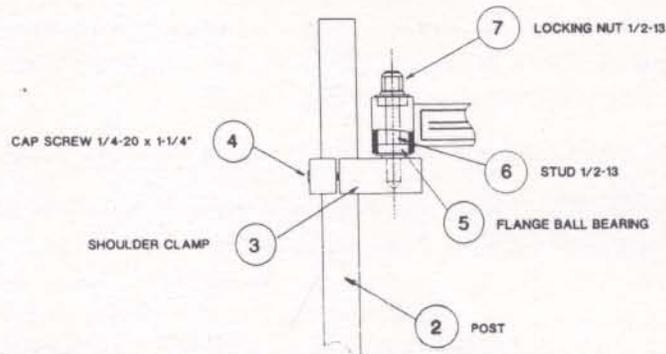
# INSTALLATION AND SET UP INSTRUCTIONS ALL MODELS

1. Remove the TABLE MOUNT from the box.
2. Bolt to work surface. It is important to level the table mount [No.1] so that the post [No.2] is 90 degrees to the work surface through full range of travel [see View #1]



**View #1**

3. Insert POST into mount, and tighten set screws.
4. Remove remaining body of ~~Asst.~~ Torque Arm from box and slide adjustable  $\Gamma$  SHOULDER CLAMP [Item No.3] over POST [Item No.2]. Tighten screws at desired height [see View #2]



**View #2**

5. A) FOR PARALLEL ~~Asst.~~ TORQUE ARMS-MODELS PARA-03110-OC OR PARA-15110-AC

You will need to supply correct fittings for your tool and ELBOW MANIFOLD openings if an air tool is used. Part #EAS-111 Air Hose Set [not included] is recommended when using PARA-03110-OCE or PARA-15110-ACE style arms.

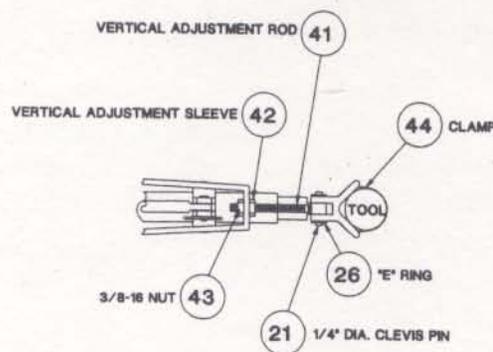
After fittings have been connected and tightened, the tool can now be attached.

### PLACEMENT OF PNEUMATIC/ELECTRIC TOOLS IN MOUNTING

If WRIST BRACKET "V" Part # EAP-202 [Item #40] is supplied, adjust the tool up or down until operator is able to establish a comfortable grip on the tool. Tighten TOOL CLAMP [Item #44][option], using small clamp for tool body diameters under 2" and large clamp for tool body diameters exceeding 2", until tool is snugly in place and cannot be moved. It is recommended to leave as much of the tool body as possible, extending below the WRIST BRACKET "V" [Item #40][option], to assure operator comfort. Whichever clamp is used, after fitting the tool to arm, excess strap should be cut and any sharp edges rounded off for safety purposes.

If AIR MANIFOLD [Item #59] is used, connect tool to manifold with air fitting.

The VERTICAL ADJUSTMENT ROD [Item #41] allows the tool to be adjusted from zero degrees [parallel] to column, up to 15 degrees in either direction from zero point. This compensates for any irregularities in the workpiece or if application requires fastener to be driven in at an angle [see View #3]. This does not take place of properly leveling the Table Mount Flange. Use for final 90 degree adjustment.



**View #3**

To adjust angle of tool, loosen the VERTICAL ADJUSTMENT SLEEVE [Item#42] clockwise to have tool angle out or counter clockwise to have tool angle in. Once desired angle is reached, tighten the 3/8-16 nut [Item #43] to hold adjustment in place.

To increase the reach capability of **AsT**: Torque Arm, remove the ring pin [Item #14] from the CYLINDER MOUNTING YOKE-ROD END [Item #12]

Remove clevis pin [Item #19] and E-ring [Item #26] from PARALLEL UPPER RAIL [Item #38].

Pull FOREARM INSERT [Item #13] out, away from arm, to desired reach, up to additional 5", Once desired reach is achieved, align hole pattern between FOREARM and FOREARM INSERT, re-insert ring pin [Item #14] in CYLINDER MOUNTING YOKE-ROD END [Item #12].

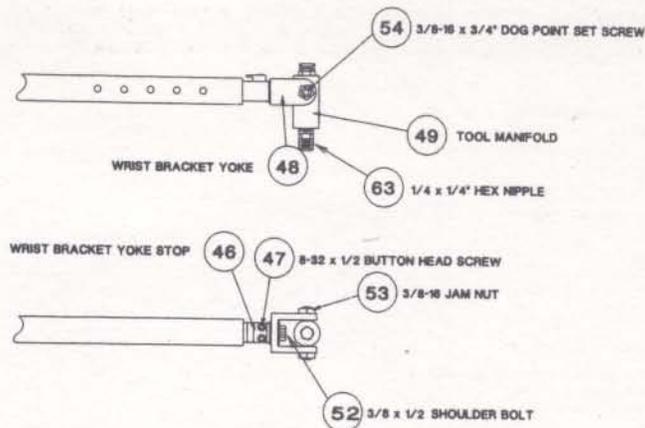
Adjust PARALLEL UPPER RAIL [Item #38] forward until length equals that of the FOREARM INSERT [Item#13].

Align holes of PARALLEL UPPER RAIL [Item #38] with CYLINDER MOUNTING CLAMP BODY [Item #27] and ELBOW [Item #10] and re-insert clevis pin [Item #19] and E-clip [Item #26].

### B) FOR STANDARD **AsT**: TORQUE ARMS – MODELS STD-03110-OC AND STD-15110-AC

Attach PNEUMATIC tool to the TOOL MANIFOLD [Item #49] and tighten. If ELECTRIC DRIVER MOUNTING [Part #EAP-202ED, Not Supplied], or PISTOL GRIP MOUNTING [Part #EAA-21, Not Supplied] is used, place tool in the "V" bracket portion of mounting and tighten hose clamp making sure tool is in a comfortable operating position for the operator.

NOTE : The WRIST BRACKET YOKE [Item #48] allows the tool to move from side to side and front to back. If the side to side movement is not wanted, remove the WRIST BRACKET YOKE STOP [Item #46, mounted on the end of FOREARM INSERT] by removing [2] button head screws [Item #47], then turn the WRIST BRACKET YOKE STOP 180 degrees to where the lip of the YOKE STOP is across the WRIST BRACKET YOKE [Item #48]. This allows the operator the option of restricting the side to side movement [see View #4 at the top of page5].



**View #4**

To increase the reach capability of the **Asst.** Torque Arm remove the ring pin [Item #14] from the CYLINDER MOUNTING YOKE-ROD END [Item #12].

Pull the FOREARM INSERT [Item #13] out, away from the arm, the desired reach, up to an additional 5" Once desired reach is achieved, align holes in FOREARM and FOREARM INSERT, re-insert ring pin in CYLINDER MOUNTING YOKE-ROD END [Item #12].

To adjust the OIL CYLINDER RETURN SPEED, remove rod of cylinder from CYLINDER YOKE [Item #21] by removing hairpin and clevis pin.

Turn cylinder rod CLOCKWISE to SLOW DOWN TRAVEL. Turn cylinder rod COUNTER-CLOCKWISE to SPEED UP TRAVEL.

Place rod end of cylinder in CYLINDER YOKE [ITEM #12] and re-insert clevis pin and hairpin.

**FOR ALL MODELS:**

6. Loosen cap screw [Item #17] in CYLINDER MOUNTING CLAMP BODY [Item #27].
7. For **Asst.** Torque Arm OIL CYLINDER, pull CYLINDER [Item #32] up through the mounting block [away from tool for heavier tool/towards tool for lighter tool] until dedired height of arm is reached. Hold in place while tightening cap screw. If this does not accomplish the needed Balance Point:
8. Remove ring pin [Item #14] from CYLINDER MOUNTING YOKE-ROD [Item #12]
9. Move YOKE [Item #12] forward desired number of adjustment holes [holes are in 1" increments] towards tool for heavier tool or away from tool for lighter tool. When desired position is located, re-insert ring pin. This increases or decreases the CYLINDER PRE-LOAD.

**FOR AIR CYLINDER MODELS:**

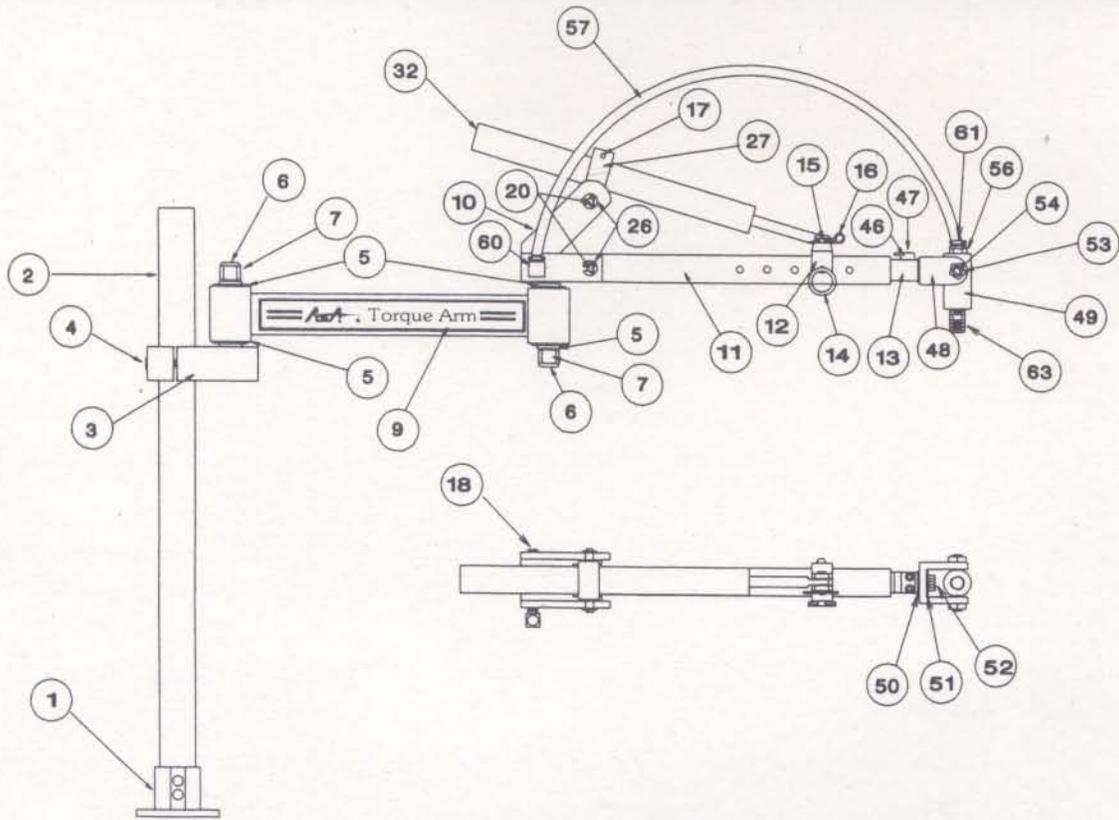
10. For **Asst.** Torque Arm with AIR CYLINDER, supply air to the 1/4" N.P.T.inlet on the ELBOW. This also supplies air to the pneumatic regulator. If the application does not require air to the driver [i.e. electric tool], then this port should be plugged with 1/4" N.P.T.plug [not supplied].

**WARNING :** Although a check valve has been supplied with the arm, when air is first connected, the arm will bounce to an upright position very quickly. All operators should stand with the front of the **Asst.** Torque Arm facing away while connecting the air supply to prevent any injuries.

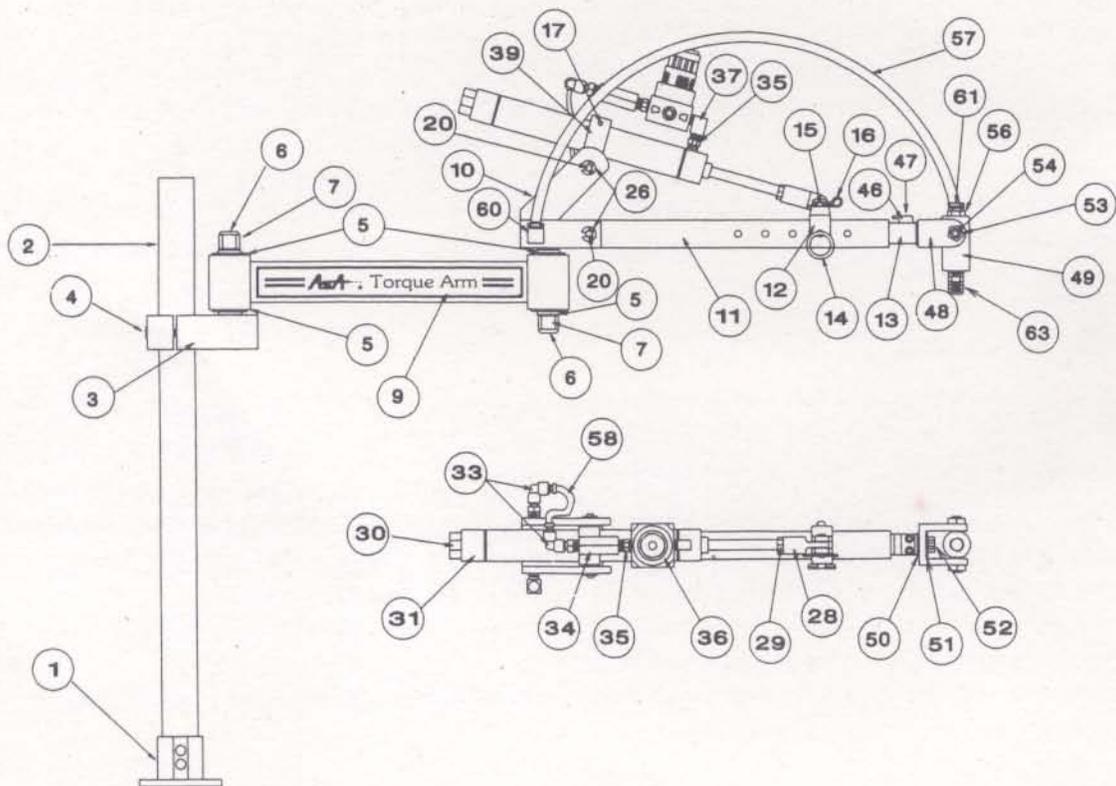
11. By turning the regulator adjustment knob clockwise, air pressure is increased to the cylinder allowing the arm to have more resistance and increased weight holding capacity.
12. By turning the regulator adjustment knob counter-clockwise, air pressure is decreased allowing the arm to have less resistance and decreased weight holding capacity.

Your **Asst.** Torque Arm is now ready for use.

# PARTS BREAKDOWN



STD-03110-OC—Oil cylinder **Ast**: Torque Arm



STD-15110-AC—Air Cylinder **Ast**: Torque Arm

## A&T Torque Arm Parts Breakdown

**STD-03110-OC , STD-15110-AC , PARA-03110-OC , PARA-15110-AC**

Item#	Part#	Qty.	Description	Item	Part#	Qty.	Description
1	EA-14	1	Table mount	35	EAC-08	2	Hex Nipple
2	EA-01	1	Post	36	EAC-02	1	Regulator
3	EA-02	1	Shoulder Clamp	37	EAC-05	1	90 Deg Street Elbow
4	EA-44	2	1/4-20 x 1-1/4" Cap Screw	38	EAP-201	1	Parallel Upper Rail
5	EA-03	4	Bearing	39	EAC-12	1	Cyl. Mtg. Clamp Body
6	EA-04	2	1/2-13 X 4" Double Ended Stud	40	EAP-202	1	Wrist Bracket "V"
7	EA-05	2	1/2-13 Locking Nut	41	EAP-204	1	Vertical Adjusting Rod
8	EA-21	2	Label	42	EAP-205	1	Vertical Adjusting Sleeve
9	EA-06	1	Upper Arm	43	EAP-206	1	3/8-16 Nut
10	EA-07	1	Elbow	44	EAP-212	1	Hose Clamp Assembly (1 lg/1 sm)
11	EA-10	1	Forearm	45	EA-38	2	Clevis Pin
12	EA-09	1	Cyl. Mtg. Yoke Rod End	46	EAS-102	1	Wrist Bracket Yoke Stop
13	EA-11	1	Forearm Insert	47	EAS-108	2	8-32 x 1/2" Button Head Screw
14	EA-18	1	1/4 x 1-5/8" Cotterless Clevis Pin	48	EAS-101	1	Wrist Bracket Yoke
15	EA-17	1	3/16 x 3/4" Clevis Pin	49	EAS-103	1	Tool Manifold
16	EA-13	1	Hair Pin Cotter	50	EAS-104	1	Bushing
17	EA-20	1	8-32 x 1" Cap Screw	51	EAS-104-1	1	3/8 Nylon Washer
18	EA-27	1	1/8" Pipe Plug	52	EAS-106	1	3/8 x 1/2" Shoulder Bolt
19	EA-36	1	1/4 x 2-5/8" Clevis Pin/Parallel Arm	53	EAS-107	2	3/8 x 16 Jam Nut
20	EA-37	2	1/4 x 2-5/16" Chevis Pin/Standard Arm	54	EAS-105	2	3/8-16 x 3/4" Dog Point Set Screw
21	EA-35	2	Clevis Pin	55	*EA-43	1	Nylon Tip Set Screw
26	EA-39	4/8	"E" Ring (4 for standard/8 for parallel)	56	EAS-113	1	1/4 x 1/4 Barb Fitting
27	EA-12	1	Cyl. Mtg. Clamp Body	57	EAS-114	1	1/4" Tubing 26" long
28	EAC-07	1	Rod End	58	EAC-13	1	5/32" Tubing 8" long
29	EAC-09	1	Rod End Nut	59	EAP-203	1	Air Manifold
30	EAC-06	1	Exhaust Filter	60	EAS-110	1	1/4 x 1/4" 90 Deg. Barb Fitting
31	EAC-04	1	Air Cylinder	61	EAS-112	2	3/8 #811 Hose Clamp
32	EA-08	1	Oil Cylinder	62	EAS-111	1	Air Hose Set
33	EAC-03	2	90 Deg. Swivel Elbow	63	EAS-115	1	1/4 x 1/4 Hex Nipple
34	EAC-01	1	Check Valve				

\*Part #EA-43 located under Part #EAS-102

01-01-01

### A&T TORQUE ARM OPTIONAL ACCESSORIES

<u>PART NO.</u>	<u>DESCRIPTION</u>
EA-01	Post-Custom Lengths Available
EAA-01	Wall Mount
EAA-02	Table Clamp
EAA-03	Conversion from Oil Cylinder to Air Cylinder
EAA-04	Conversion from Standard to Parallel
EAA-05	Conversion from Parallel to Standard
EAA-06	Dual Cylinder (Not Shown)
EAA-21	Custom Pistol Grip Mtg. Small
EAP-202ED	Electric Driver Mtg. for Std. Arm
EAS-111C	Hose Assembly Complete (26")
	Custom Lengths Available
EAP-202	Wrist Bracket "V"

NOTE : Above items are optional accessories and must be purchased separately.

### A&T TORQUE ARM RECOMMENDED SPARE PARTS

<u>ITEM NO</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
05	4	EA-03	Flange Ball Bearing
32	1	EA-08	Oil Cylinder