



## IMPORTANT SAFETY INSTRUCTIONS

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

The following safety precautions call attention to potentially dangerous conditions.

**DANGER:** Immediate hazards which **WILL** result in severe personal injury or death.

**WARNING:** Hazards or unsafe practices which **COULD** result in severe personal injury or death.

**CAUTION:** Hazards or unsafe practices which **MAY** result in *minor* personal injury or product or property damage.

**NOTE:** Instruct operators in the safe, proper use and maintenance. Keep this manual for future reference.

## INSTALLATION

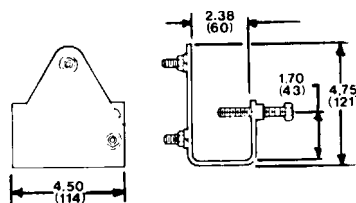
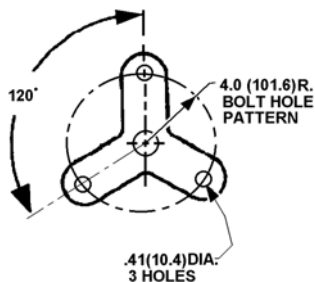
**WARNING:** Failure to read, understand, and follow these instructions may result in hazards or unsafe practices **COULD** result in severe personal injury or death.

**CAUTION:** Operators need to be instructed on the safe, proper use and maintenance of this product. Keep this manual for future references. Hazards or unsafe practices **MAY** result in *minor* personal injury or product or property damage.

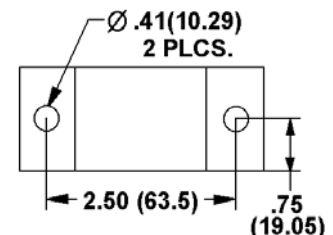
## MOUNTING

**NOTE:** Do not over-tighten screws. This will cause clamps to break.

The torque arm mounts directly to standard workbenches or stations. Mount base to bench with 3/8-inch bolts (length to suit). Using mounting base as a template, mark and drill the 13/32-inch holes. Use of optional bench clamp BC-1 does not require holes to be drilled in the bench. Torque arm may be mounted to the wall by using clamp assembly and 3/8 inch bolts. Drill horizontal holes 2.50 inches (63.5 mm) apart. Use proper anchors to support arm and tools. Clamps may be used as a template for hole locations. Torque arm models EMP-12 and EMS-12 have a maximum reach of 24 inches. Models EMP-18 and EMS-18 have a maximum reach of 30 inches. Both models have a maximum load capacity of 5 lb. (2.3 kg). Torque arm unit may be adjusted up and down on vertical column by loosening socket head screws on column mount.



**BENCH CLAMP  
BC-1**  
(Optional)



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## **OPERATION**

### **TOOL ATTACHMENT**

**NOTE:** To install UM-1 on earlier model torque arm without bushings use sleeve bearing inside UM-1 mounting hole (not shown).

Pneumatic driven tools are connected to the bottom of tool bracket at the ¼ inch NPT port. Air hose is connected to the ¼ inch NPT port on front of tool bracket. For PG-1 accessory, route airline directly to pistol grip tool since PG-1 mounts at the normal air exit port. Air hose or electric cord is routed through hose guide located on top of swivel assembly, and through vertical column, entering at the top of the column and exiting through the hole in column located just above mounting base. On optional tool mounts, the V-block tool holder will handle tools up to 1-½ inch diameter and weighing up to 5 lb. (2.3 kg). Torque arms are capable of absorbing up to 20 lb.ft. (27 N•m) of torque developed by the power tool.

Optional tool mounts (EM-1 and PG-1) are screwed into bracket with special thread forming screws. These screws do not require any threads in casting mounting holes. They can be screwed in by hand or with either a variable speed or low RPM electric or air tool. Tool are mounted in tool holder by loosening screws on tool holder end cap and sliding tool inside opening to desired position, then retighten screws.

Optional swivel mount for single arm is assembled between the bracket and articulating arm. To install, remove bushing and slide UM-1 into the end of tube. Slide bushing back through tube and UM-1. Secure in place with small shaft and retaining rings.

### **TOOL ADJUSTMENT**

Adjust spring tension easily without disassembly to balance too weight. Tilt spring retainer and pull downward to disengage pin on retainer from holes in articulating arm. Then slide retainer along articulating arm to next hole. Slide forward extending spring for more tension and backward to reduce spring tension.

## **SERVICE**

### **SPRING REPLACEMENT**

To replace springs, unhook spring from spring retainer and spring draft then remove spring. Replace spring by attaching spring to spring shaft and spring retainer. Close spring loop on end of spring to secure.

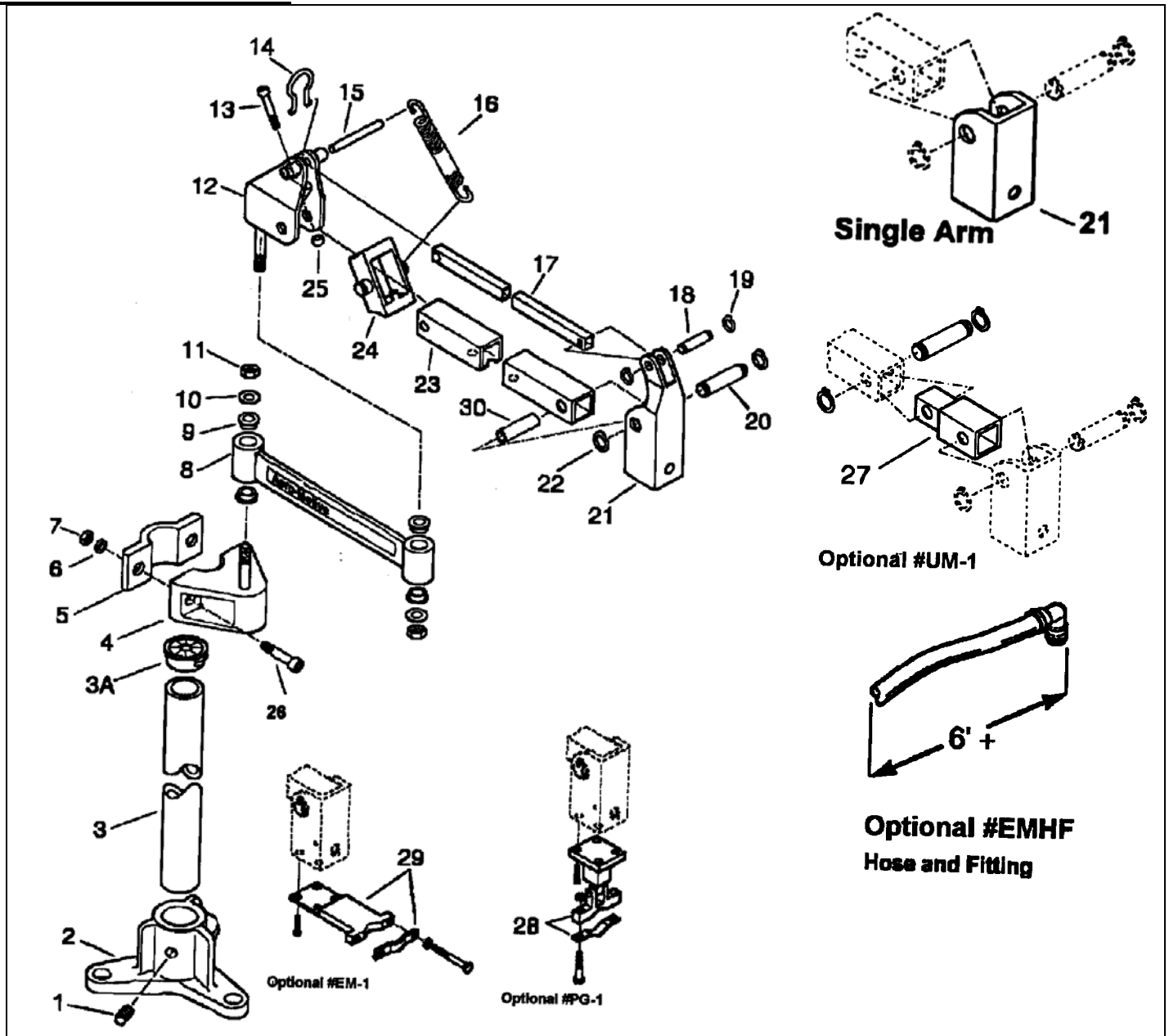
### **LUBRICATION**

Torque arm is lubricated for life; however, applying a few drops of light oil to bearings twice a year is recommended.

### **PARTS REPLACEMENT**

All parts are replaceable in the field without special tools. Always remove spring tension before attempting to disassemble parts.

# REPLACEMENT PARTS



Reference Number	Part Number	Qty.	Description
1	00053P0204	1	Screw; 1/4-20 x 3/8 Set
2	M60100002	1	Base; Mounting
3	M37050002	1	Column; Vertical
3A	C75500006	1	Bushing
4	H53110001	1	Assembly; Clamp
5	M76510032	1	Clamp; Column
6	00101P0021	2	Washer; 3/8 Lock
7	00151P0150	2	Nut; 3/8-16
8	M32800001	1	Jib
9	00277P0019	4	Bearing
10	M30010015	2	Washer
11	C22470101	2	Nut; 1/2-13 Lock
12	H53110002	1	Assembly; Swivel
13	C04020291	1	Screw; 5/16-18 x 2 Soc. HD.

14	M86700009	1	Guide; Hose
15	M27030016	1	Shaft; Spring
16	M15120001	2	Spring (EMx-12)
	M15120002	2	Spring (EMx-18)
17	M40470102	1	Link; Parallel (EMP-12)
	M40480085	1	Link; Parallel (EMP-18)
18	M24460096	1	Shaft (EMP only)
19	C01700116	2	Ring; Retaining (EMP only)
20	M24460095	2	Shaft
21	M05610007	1	Bracket (EMPxx)
	M05610008	1	Bracket (EMSxx)
22	C01700122	4	Ring; Retaining
23	M37830013	1	Arm; Articulating (EMx-12)
	M37830014	1	Arm; Articulating (EMx-18)
24	M85710001	1	Retainer; Spring
25	M83110021	1	Bumper
26	C10500285	2	Screw; 3/8-16 x 1-1/2 Soc. HD
27	UM-1	Optional	Assembly; Swivel
28	PG-1	Optional	Grip; Pistol
29	EM-1	Optional	Tool; Electric
30	C50120123	2	Bushing; 3/8 x 1/2 x 1"
A	EMHF	Optional	Assembly; Hose

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