

Logan

8 INCH SHAPER

Operation

INSTRUCTIONS

and

Parts List

HOW TO ORDER REPAIR PARTS

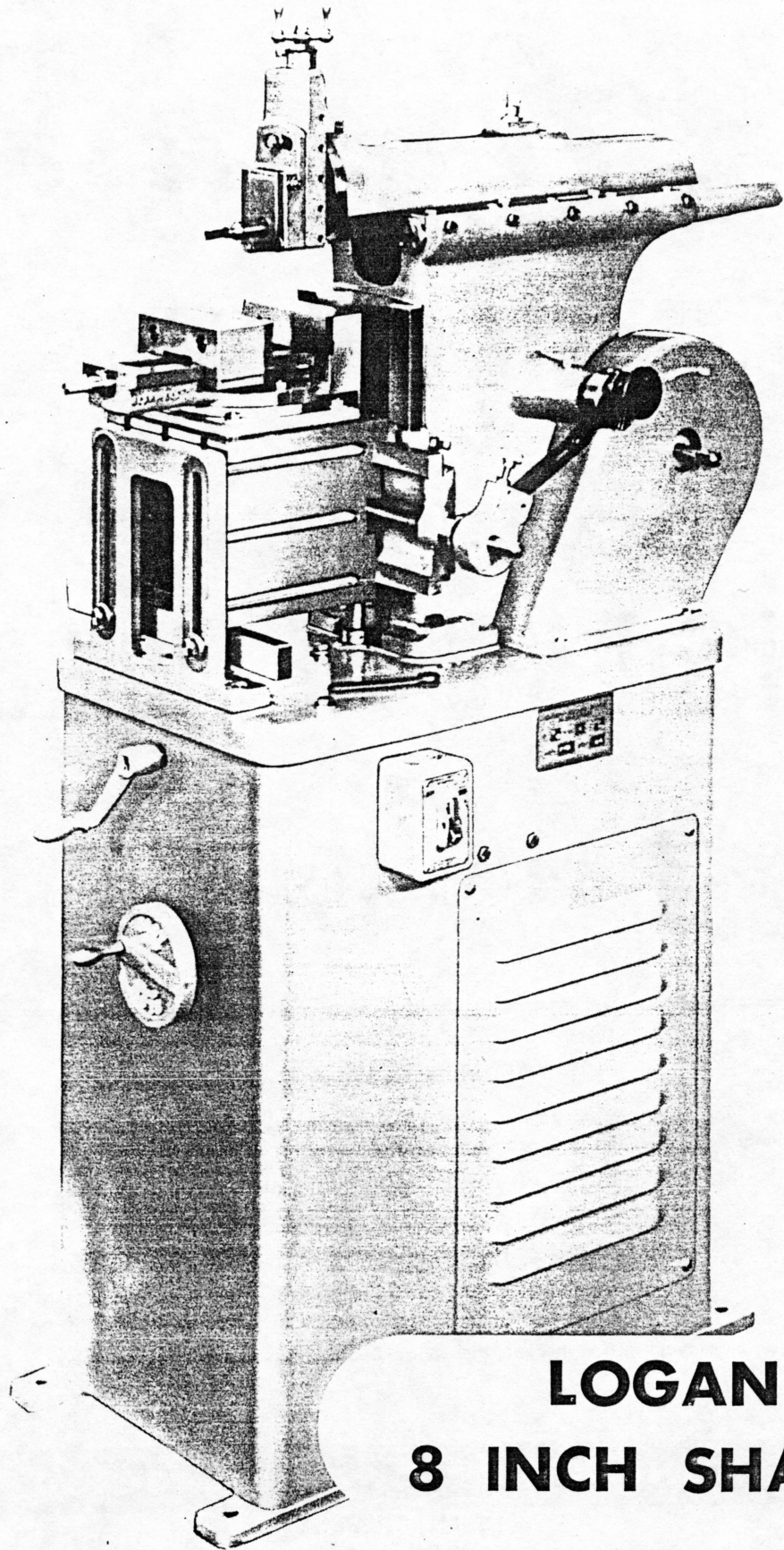
Should you need repair parts for your shaper the following information is necessary to fill your order promptly and correctly.

1. Complete name and number of the part as listed in the parts list.
2. Model and serial number of your shaper.

The serial number is located on the upper portion of the main frame near the right hand end of machine. The model number is stamped on the name plate located on the upper left-hand side.

Please place your order through the Logan Dealer from whom you obtained the shaper.

LOGAN ENGINEERING CO. • CHICAGO 30, ILL.



**LOGAN
8 INCH SHAPERS**

OPERATING INSTRUCTIONS

The Logan Shaper is carefully packed and bound in a sturdy crate for safe arrival in perfect working condition. It arrives completely assembled, ready for operation. The motor, too, if ordered with the shaper, is ready for service. The shaper and motor are thoroughly lubricated at the factory, and all machined surfaces are grease coated to prevent rusting while in stock and transit.

1. SETTING UP

Mount the shaper on a solid, level space to eliminate the possibility of vibration. Level the shaper lengthwise and crosswise. Use shims, if necessary, to obtain a level, firm foundation.

Fasten the shaper firmly to the floor with bolts or lag screws.

Wipe off excess grease and clean the machine with kerosene or similar substance.

Before operating the machine for any length of time, lubricate it thoroughly at all points indicated by the lubrication chart.

2. MOTOR MOUNTING AND BELT TENSIONING

If motor is ordered with the shaper, it is factory mounted on the motor bracket and wired to the switch with cord extending through the base of the shaper for electrical outlets.

If the motor is not ordered with the shaper, or if, for special reason, it is not mounted at the factory, it becomes necessary to drill four holes to accommodate the motor base.

Belt adjustment is made by means of two bolts extending through the rear of the base. Belt tension is increased by loosening the lower bolt and tightening the upper bolt. Reversing this procedure decreases belt tension.

3. HOLDING WORK

The exceptionally large table of the Logan Shaper is designed for easy mounting of all types of work pieces. Top and side surfaces have three "T" slots each to permit secure fastening of clamps or fixtures. Its heavy-ribbed, sturdy vise is fastened to the table by four square head bolts in T-slots. The vise is mounted on a swivel and calibrated from 0° to 90° right and left. Opening capacity of the vise is 5" and jaws measure 1½" by 5".

4. STROKE ADJUSTMENT

Measure work to determine length of stroke required. Allow approximately ¼" extra for tool clearance.

By means of crank, run ram to furthestmost return position.

On left hand side of shaper open small door thus exposing crank pin stud.

Loosen crank pin stud by turning to right (left hand thread).

Loosen crank pin stud located on top and center of ram.

Push ram manually until stroke indicator shows desired length of stroke (plus ¼" extra allowance) on stroke indicator plate.

Tighten crank pin studs on stroke adjuster and stroke indicator.

Test stroke with crank before applying power to make certain that the ram does not strike front of shaper frame.

5. LOCATING RAM POSITION

Loosen stroke indicator.

Push ram manually until ram is in proper position to cover work.

Tighten stroke indicator and manually test stroke once more.

6. TOOL HEAD

The tool head is mounted on the front of the ram.

It is mounted on a swivel and rotates 45° to right and left of its upright position. To change position of tool holder loosen two hex head cap screws holding swivel. Turn head to desired degree of rotation and tighten securely.

7. CLAPPER BOX

The clapper box on the Logan Shaper can be rotated to left or right by loosening a single hex head cap screw. The clapper is mounted within the clapper box on a pivot pin. This arrangement permits the tool bit to clear the work on the return stroke with minimum interference. Immediately after the tool bit clears the work on the return stroke, the clapper hold-down returns the clapper to its operating position.

To remove or change the tool holder, turn the knurled half nut on the clapper hold-down, in this way releasing spring tension.

8. TABLE ADJUSTMENTS

The Logan Shaper table is easily adjustable both horizontally and vertically. Horizontal adjustment is

made by use of the crank pin stud extending out from the right side at the rear of the table. Maximum horizontal movement is 11½"

To make vertical adjustment, a conveniently located crank permits quick raising and lowering of the table. Loosen the top and bottom gib nuts on the right side of the table ways. Turn the crank to the right to raise the table, or to the left to lower the table. When the table reaches the desired position, tighten the gib locks. Maximum vertical movement is 5½"

9. FEED

The Logan Shaper feed is reversible and adjustable. One tooth on the ratchet is equal to a cross feed of .002". There are six automatic feeds in either direction. They are .002", .004", .006", .008", .010" and .012".

A one-quarter turn of the feed handle will disengage the feed, while an additional quarter-turn will again

engage the feed, but in the opposite direction. Consequently, a half-turn of the handle reverses the feed.

To decrease the feed, loosen the Feed Crank Knob and move the Feed Crank Nut toward center. To increase the feed, move the Nut farther away from center.

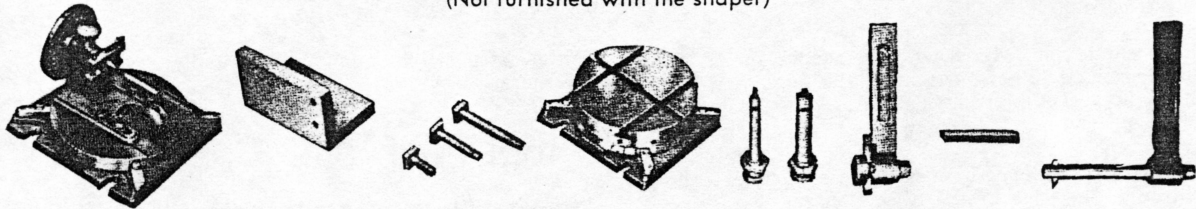
For most effective operation, the feed should take place during the return stroke of the ram. This is accomplished by moving the Feed Crank Nut in one direction or the other from center, depending on which way the table is to feed.

10. OPERATING SPEEDS

A variable number of reciprocations of the ram are obtainable through the Variable Speed Control in the base. Speeds are changed by turning the handle on the front of the base. It is not necessary to stop the motor or change belts to increase or decrease ram reciprocations.

ACCESSORIES FOR LOGAN 8" SHAPERS

(Not furnished with the shaper)



A — No. 80199 INDEX CENTERS

Capacity of 5 inches between centers and a 3-inch swing. Provided with index plate with divisions between 22-30.

Shipping weight 16 lbs.

B — No. 80275 ANGLE PLATE

For handling irregularly shaped work. Can be clamped to the top or the side of the table through holes provided.

Shipping weight 7 lbs.

C — "T" HEADED BOLTS

Lengths, 1", (80355); 2¼" (80260); 3¼" (80261).

Shipping weight 1 lb. Any size.

D — No. 80249 ROTARY TABLE

This table has a work surface 7" in diameter and has three "T" slots on the face for clamping and holding a variety of parts that require slotting, etc.

Shipping weight 23 lbs.

E — KEY WAY TOOL HOLDER 7/16" DIAMETER OR 5/8" DIAMETER

The round tool holders can be used in place of the regular tool post in the shaper and are desirable when doing inside work such as key ways and slotting.

(80280) Shipping weight 1 lb. 7/16" diameter.

(80281) Shipping weight 1 lb. 5/8" diameter.

F — No. 540 SHAPER TOOL HOLDER

With high speed cutter.

Shipping weight 1 lb.

G — No. 560 BLANK CUTTER BITS

Unground, measure ¼" x ¼" x 2". Heat treated high speed steel.

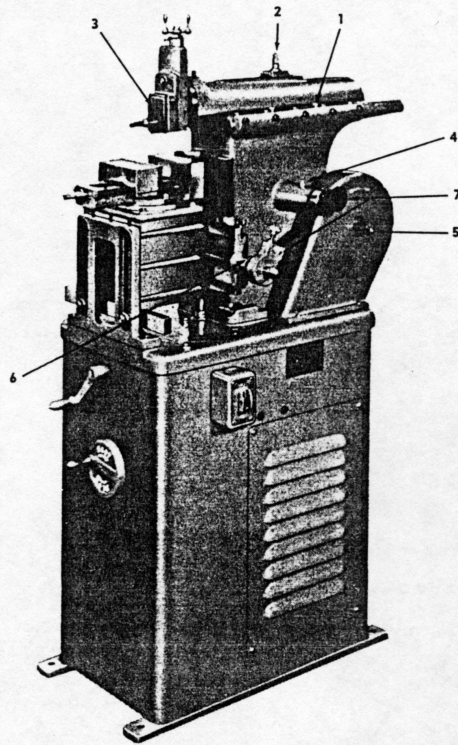
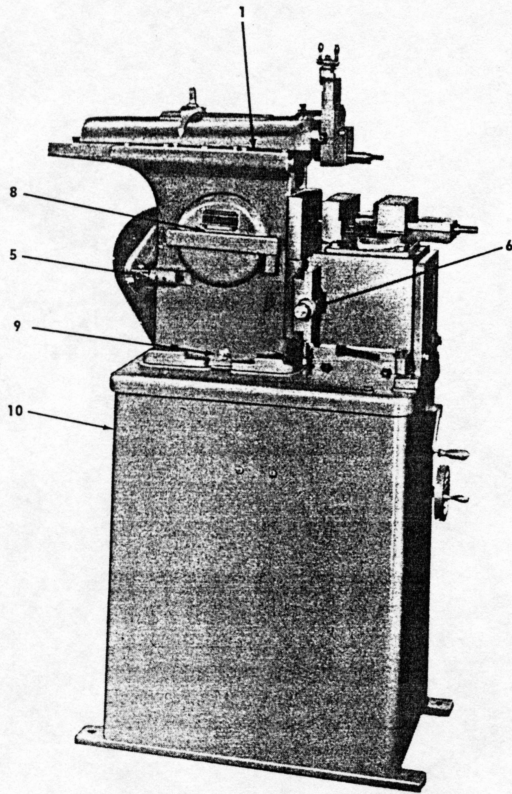
Shipping weight 1 lb. Set of 6.

H — No. 541 EXTENSION TOOL HOLDER

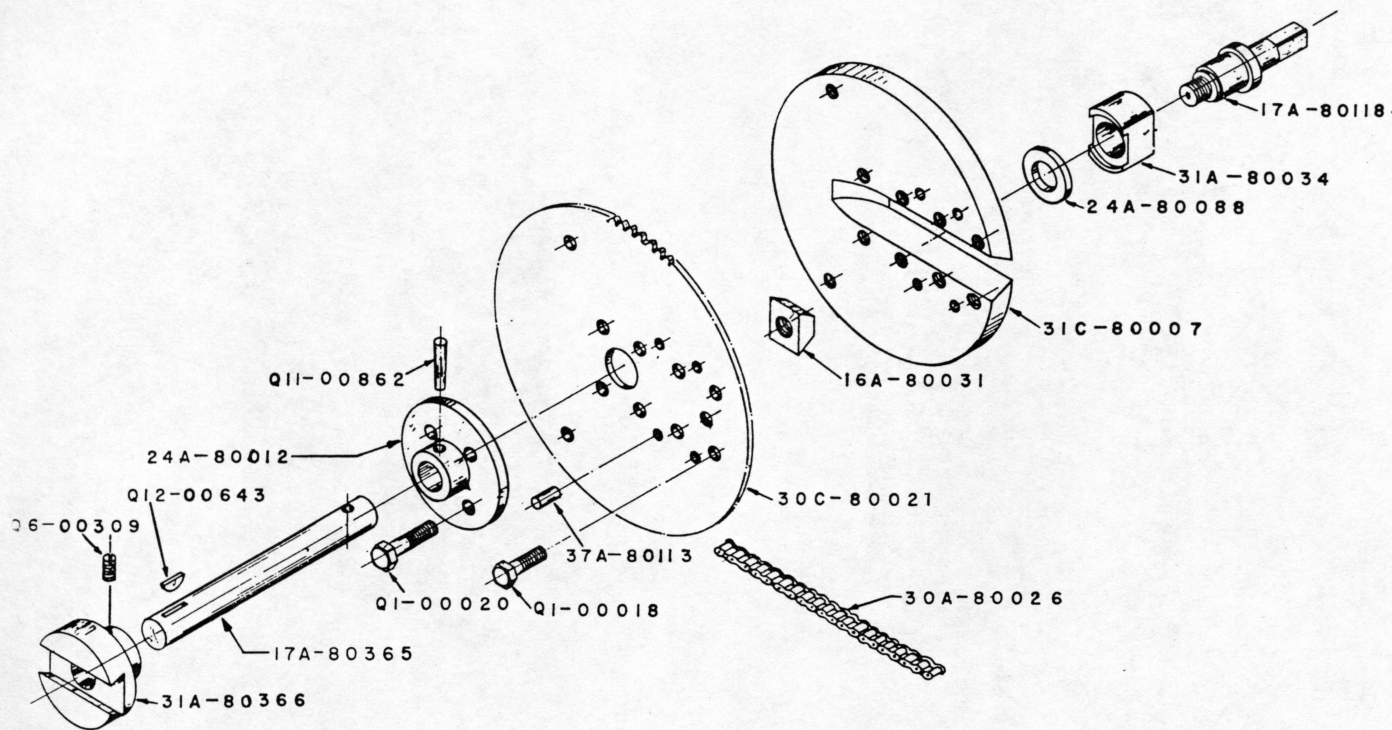
Complete with high speed steel cutter.

Shipping weight 1½ lb.

LUBRICATION INSTRUCTIONS

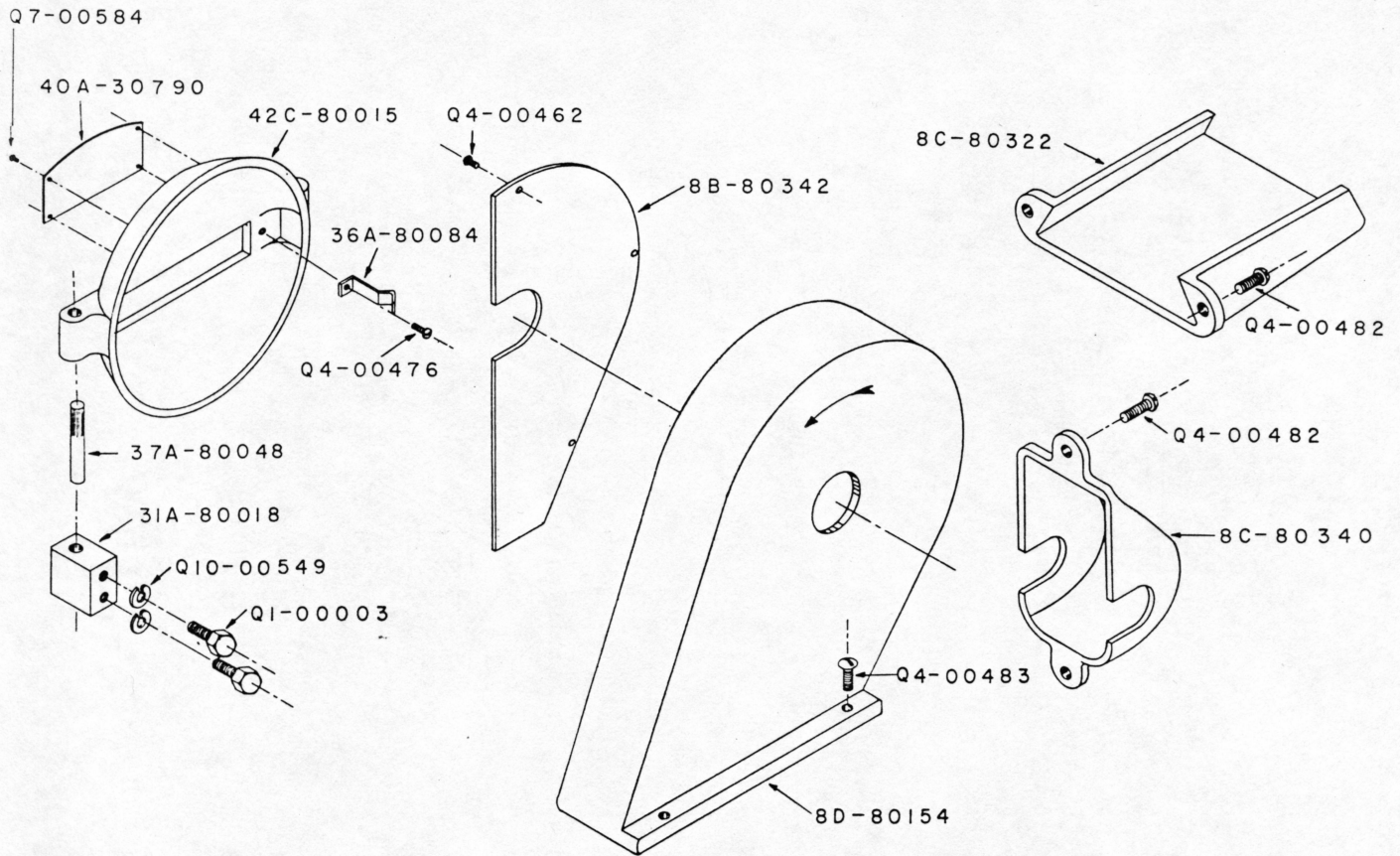


1. Ram:—There are two oil cups on each side of the ram provided for oiling.
 2. Eccentric Drive Link:—A ball oiler is located in the top of the ram clamp screw. This assures proper lubrication to the link.
 3. Clapper:—An oil hole is provided for lubrication to tapered pin in clapper box.
 4. Sprocket Drive:—A pressure fitting with cavities is located at this point on the machine, which will retain a light grease. This point should be lubricated once every thousand operating hours.
 5. Jackshaft:—There are two oil cups located in the bearings to assure free lubrication of jackshaft.
 6. Saddle Screw:—For proper lubrication of saddle screw an oil hole has been located in each end of the saddle.
 7. Link:—An oil hole at each end of linkage for lubrication.
 8. Block:—Open cover to lubricate block.
 9. Eccentric Arm Shaft:—A pressure fitting with cavities is provided to retain a light grease. This point should be lubricated every thousand hours.
 10. Variable Speed Pulley:—A pressure fitting is located on the back side of the base connected by flexible lubrication hose to pulley. Use a light grade grease.
- A stick graphite or a grease with fibre base should be used for lubrication of the roller chain drive.



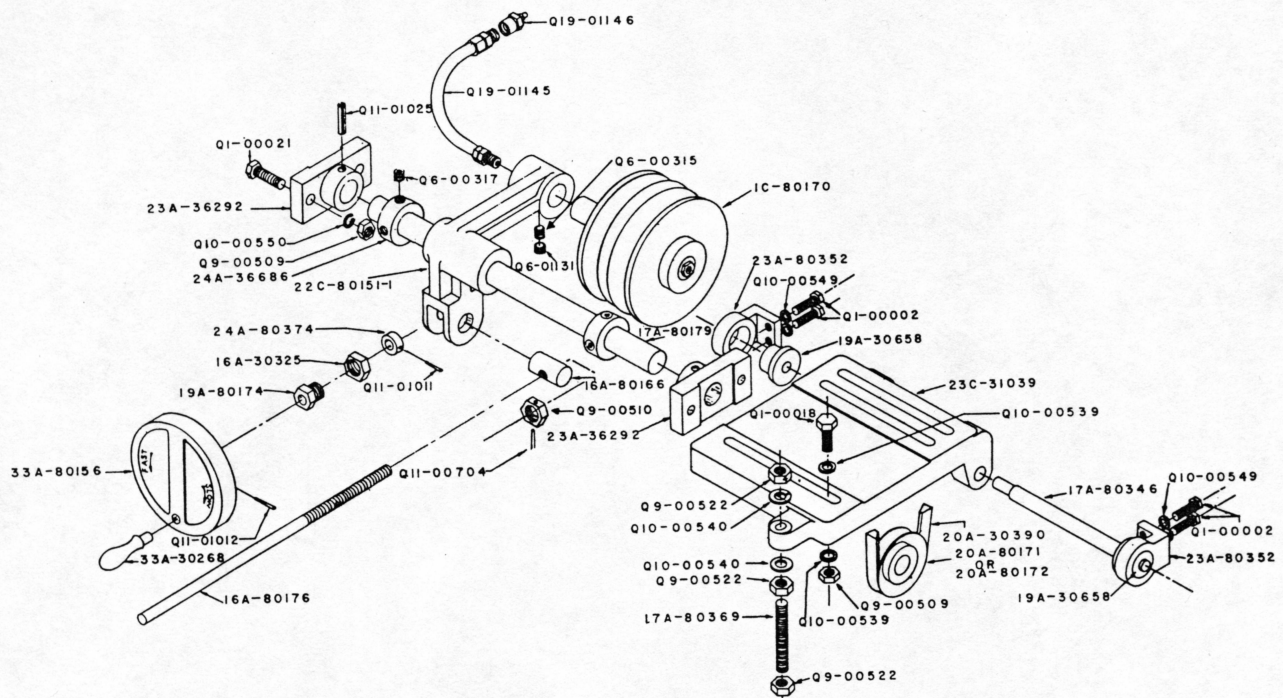
8-21W SPROCKET ASSEMBLY

B.M. 2-1040		DRWG. NO. 1C-80021W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
16A-80031	1	Crank Pin Nut		4
17A-80118	1	Crank Pin Stud		8
17A-80365	1	Drive Shaft		8
24A-80012	1	Sprocket Hub		12
24A-80098	1	Crank Pin Washer		3
30A-80026	1	Roller Chain		3
30C-80021	1	Bull Sprocket	2	10
31A-80034	1	Crank Block		8
31A-80366	1	Feed Plate		14
31C-80007	1	Crank Pin Plate	6	4
37A-80113	4	Sprocket Dowel Pin		3
Q1-00018	7	Hex. Hd. Cap Screw 5/16"-18 x 3/4		3
Q1-00020	4	Hex. Hd. Screw 5/16"-18 x 1"		3
Q6-00309	1	Set Set Screw 1/4"-20 x 1/4"		3
Q11-00862	1	Taper Pin		3
Q12-00643	1	Woodruff Key		3



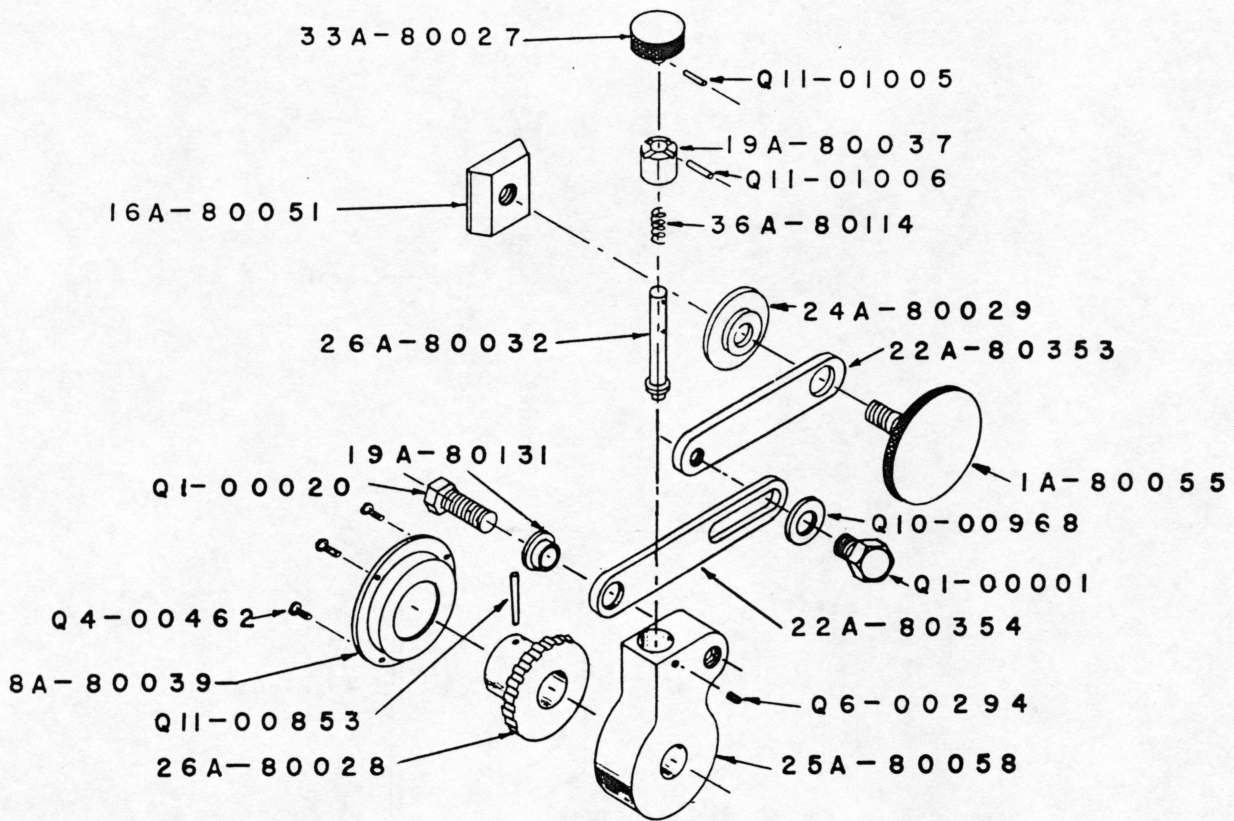
8-12W HINGE DOOR & BELT GUARD ASSEMBLY

B.M. 2-1041		DRWG. NO. 1D-80012W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
8B-80342	1	Belt Guard Cover	5	
8C-80322	1	Ram Guard	1	4
8C-80340	1	Chain Guard		14
8D-80154	1	Belt Guard	15	4
31A-80018	1	Hinge Block		12
36A-80084	1	Door Catch Spring		3
37A-80048	1	Hinge Pin		12
40A-30790	1	Name Plate		6
42C-80015	1	Door	1	8
Q1-00003	2	Hex. Hd. Cap Screw 1/4"-20 x 3/4"		3
Q4-00462	3	Rd. Hd. Screw 6-32 x 3/8"		3
Q4-00476	1	Rd. Hd. Screw 8-32 x 1/4"		3
Q4-00482	4	Rd. Hd. Screw 1/4"-20 x 5/8"		3
Q4-00483	2	Rd. Hd. Screw 1/4"-20 x 3/4"		3
Q7-00584	4	Drive Screw 3/16" lg		3
Q10-00549	2	Lockwasher		3



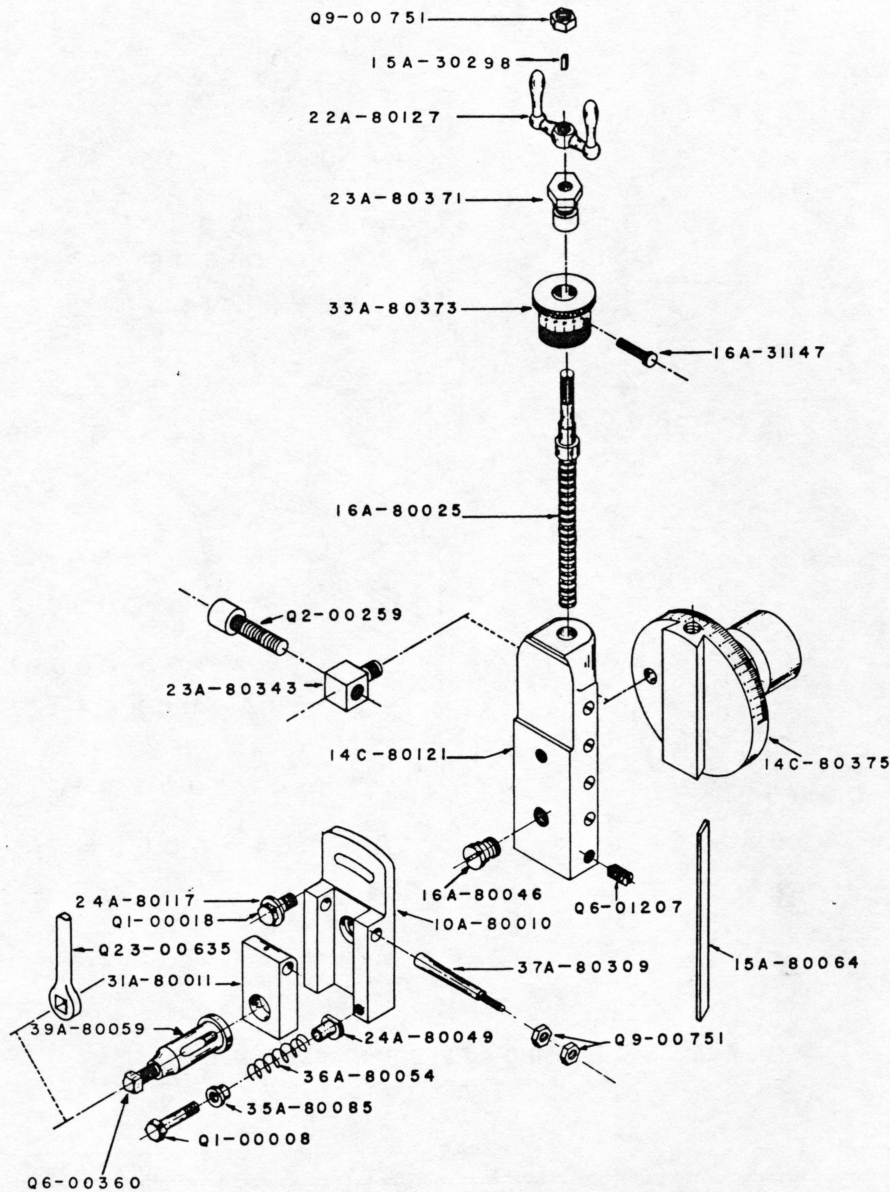
8-152W SPEED CONTROL & MOTOR BRACKET ASSEMBLY

B.M. 2-1042				DRWG. NO. 1D80152W					
PART NO.	QUAN.	DESCRIPTION	SHIP. WT.		PART NO.	QUAN.	DESCRIPTION	SHIP. WT.	
			LBS.	OZS.				LBS.	OZS.
1C-80170	1	Speed Control Pulley Assembly ..			Q1-00002	4	Hex. Hd. Cap Screw 1/4-20 x 5/8		3
16A-30325	1	Nut		3	Q1-00021	4	Hex. Hd. Screw 5/16-18x1 1/4 ..		3
16A-80166	1	Adjustable Screw Nut		6	Q6-00315	1	Soc. Set Screw 5/16-18 x 3/8 ...		3
16A-80176	1	Speed Control Screw	1	2	Q6-00317	4	Soc. Set Screw 3/8-16 x 3/8 ...		3
17A-80179	1	Hinge Rod		12	Q6-01131	1	Set Screw 5/16-18 x 1/8		3
17A-80346	1	Shaft	1	5	Q9-00509	8	Nut		8
17A-80369	1	Stud		8	Q9-00510	1	Nut		3
19A-30658	2	Rubber Bushing		3	Q9-00522	3	Nut		3
19A-80174	1	Bushing		5	Q10-00539	4	Washer		3
20A-30390	1	Vee Belt 40"		6	Q10-00540	2	Washer		3
23A-80171	1	Motor Pulley (5/8" Bore)		8	Q10-00549	4	Lock Washer		3
23A-80172	1	Motor Pulley (3/4" Bore)		8	Q10-00550	4	Lock Washer		3
22C-80151-1	1	Timer Arm	4	10	Q11-00704	1	Grove Pin		3
23A-36202	2	Rod Bracket	1		Q11-01011	1	Roll Pin		3
23A-80352	2	Hinge Bracket		7	Q11-01012	1	Split Pin		3
23C-31039	1	Motor Bracket	9		Q11-01025	2	Roll Pin		3
24A-36686	2	Collar		3	Q19-01145	1	Flexible Feed Line		8
24A-80374	1	Collar	1		Q19-01146	1	Grease Fitting		4
33A-30268	1	Handle		6					
33A-80156	1	Hand Wheel	1						



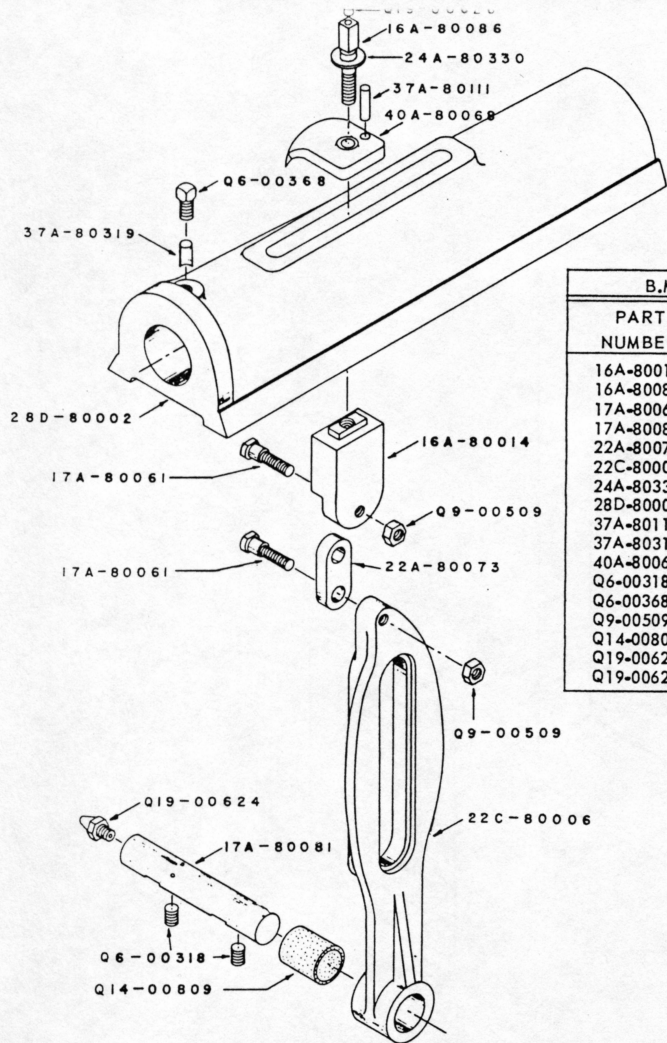
8-6W RATCHET HOUSING & FEED PAWL ASSEMBLY

B.M. 2-1043		DRWG. NO. 1C-80006W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
1A-80055	1	Feed Crank Knob	1	6
8A-80039	1	Ratchet Housing Cover		14
16A-80051	1	Feed Crank Nut		4
19A-80037	1	Feed Bushing		3
19A-80131	1	Feed Link Bushing		3
22A-80353	1	Feed Link		6
22A-80354	1	Feed Link		6
24A-80029	1	Feed Crank Pin Washer		3
25A-80058	1	Housing		3
26A-80028	1	Ratchet Wheel		5
26A-80032	1	Ratchet Wheel Pawl		3
33A-80027	1	Ratchet Feel Knob		4
36A-80114	1	Ratchet Pawl Spring		3
37A-01005	1	Pin		3
37A-01006	1	Pawl Pin		3
Q1-00001	1	Hex. Hd. Cap Screw 1/4-20 x 1/2"		3
Q1-00020	1	Hex. Hd. Screw 5/16-18 x 1"		3
Q4-00462	3	Rd. Hd. Screw 6-32 x 3/8"		3
Q6-00294	1	Soc. Set Screw 10-24 x 3/16"	3	
Q10-00968	1	Washer	3	
Q11-00853	1	Taper Pin	3	



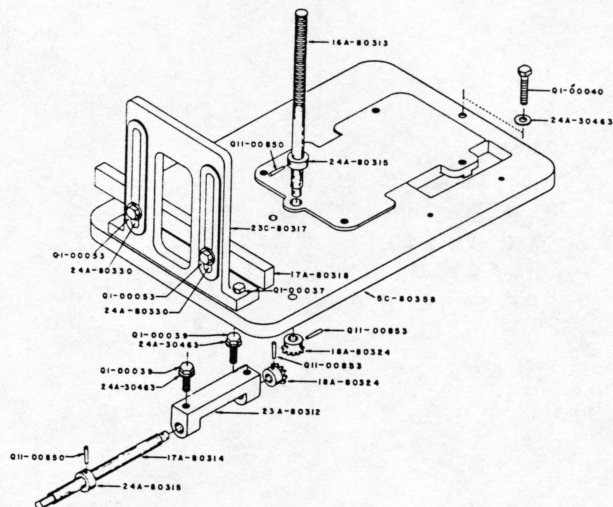
8-8W TOOL HEAD ASSEMBLY

B.M. 2-1044				DRWG. NO. 1C80008W					
PART NO.	QUAN.	DESCRIPTION	SHIP. WT.		PART NO.	QUAN.	DESCRIPTION	SHIP. WT.	
			LBS.	OZS.				LBS.	OZS.
10A-80010	2	Clapper	2		31A-80011	1	Clapper	1	4
14C-80121	1	Compound	3	8	33A-80373	1	Dial		3
14C-80375	1	Compound Swivel	5	6	35A-80085	1	Retainer		3
15A-30298	1	Key		3	36A-80054	1	Spring		3
15A-80064	1	Compound Gib		4	37A-80309	1	Taper Pin		4
16A-31147	1	Locking Screw		3	39A-80059	1	Tool Post		5
16A-80025	1	Compound Screw		7	Q1-00008	1	Hex. Hd. Cap Screw 1/4-20 x 3/4"		3
16A-80046	1	Screw		3	Q1-00018	1	Hex. Hd. Cap Screw 5/16-18x3/4		3
22A-80127	1	Double Handle Ball Crank		8	Q2-00259	1	Soc. Set Screw		3
23A-80343	1	Swivel Screw Bracket		4	Q6-00360	1	Sq. Hd. Set Screw 3/8-16x1 1/2		3
23A-80371	1	Dial Adapter		4	Q6-01207	5	Gib Screw		3
24A-80049	1	Clapper Hold Down		3	Q9-00751	3	Jam Nut		3
24A-80117	1	Washer		3	Q23-00635	1	Tool Post Wrench		8



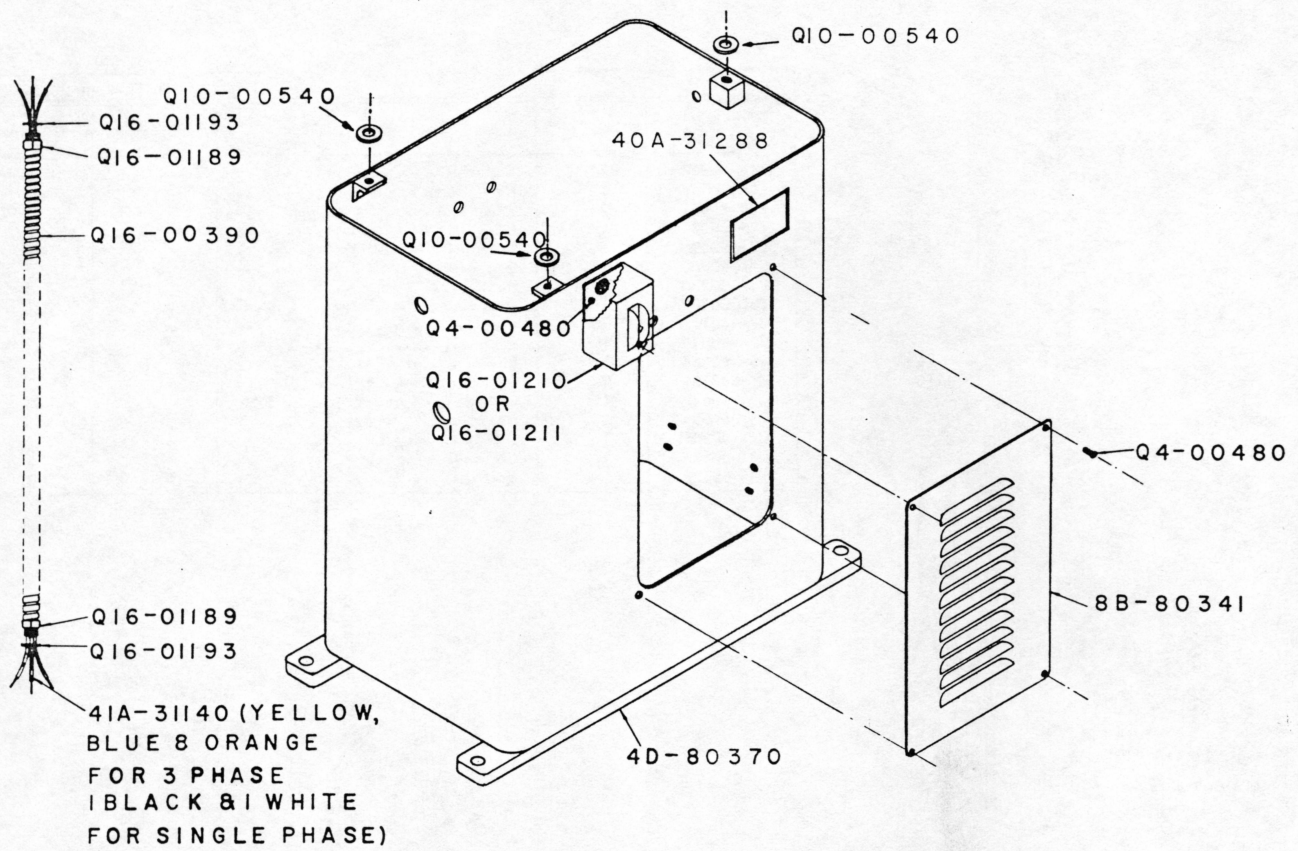
8-4W RAM & ECCENTRIC ARM ASSEMBLY

B.M. 2-1045		DRWG. NO. 1C-80004W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
16A-80014	1	Ram Nut	1	8
16A-80086	1	Ram Clamp Screw		3
17A-80061	2	Stud		3
17A-80081	1	Eccentric Arm Shaft		4
22A-80073	1	Eccentric Drive Link		4
22C-80006	1	Eccentric Arm	5	8
24A-80330	1	Washer		3
28D-80002	1	Ram	24	
37A-80111	1	Pin		3
37A-80319	1	Plug		3
40A-80068	1	Stroke Indicator		3
Q6-00318	2	Soc. Set Screw 3/8-16 x 7/16		3
Q6-00368	1	Sq. Hd. Set Screw 7/16-14 x 3/4"		3
Q9-00509	2	Hex. Nut		3
Q14-00809	1	Oilless Bearing		3
Q19-00624	1	Grease Fitting		3
Q19-00626	1	Ball Oiler		3



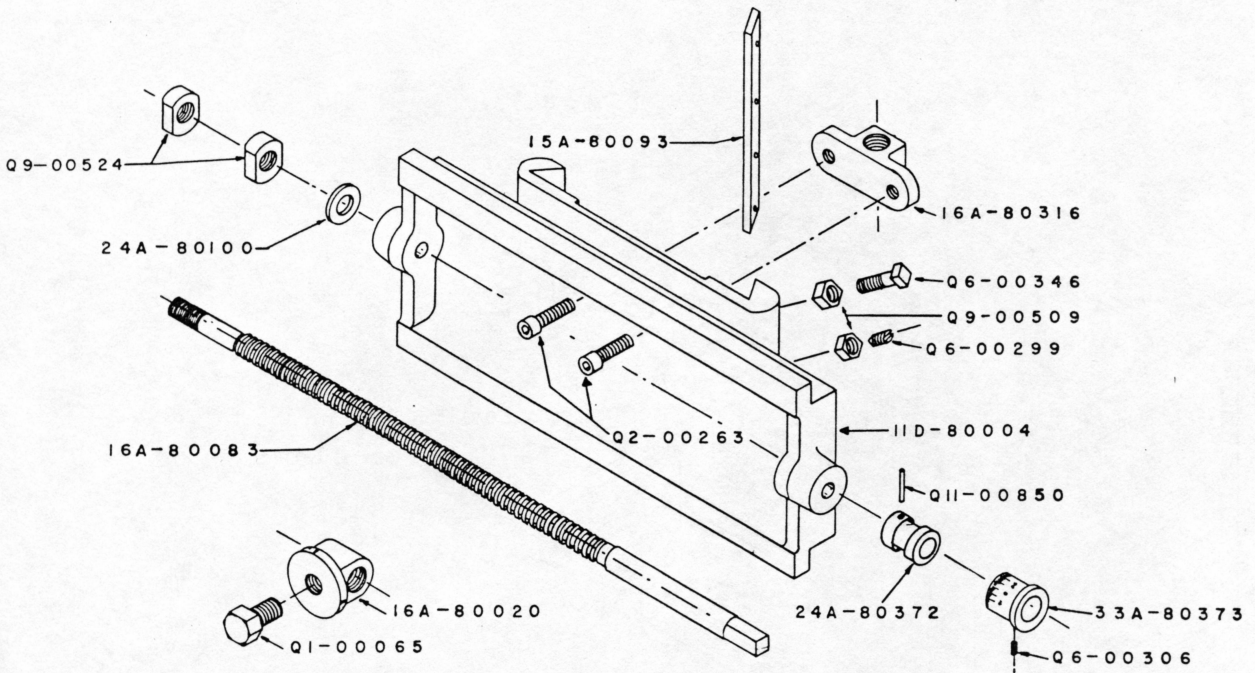
8-320W FRAME BASE ASSEMBLY

B.M. 2-1046		DRWG. NO. 1D-80320W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
5C-80358	1	Frame Base	50	8
16A-80312	1	Table Screw	2	
17A-80314	1	Table Shaft		12
17A-80318	1	Table Support	3	8
18A-80324	2	Miter Gear		4
23A-80312	1	Bearing Bracket	2	
23C-80317	1	Table Support	9	12
24A-30463	5	Washer		3
24A-80315	2	Collar		3
24A-80330	2	Washer		3
Q1-00037	2	Hex. Hd. Cap Screw 3/8-16 x 1 1/4		3
Q1-00039	2	Hex. Hd. Cap Screw 3/8-16 x 1 3/4		3
Q1-00040	3	Hex. Hd. Cap Screw 3/8-16 x 2		3
Q1-00053	2	Hex. Hd. Cap Screw 7/16-14 x 1 1/2		3
Q11-00850	2	Taper Pin		3
Q11-00853	2	Taper Pin		3



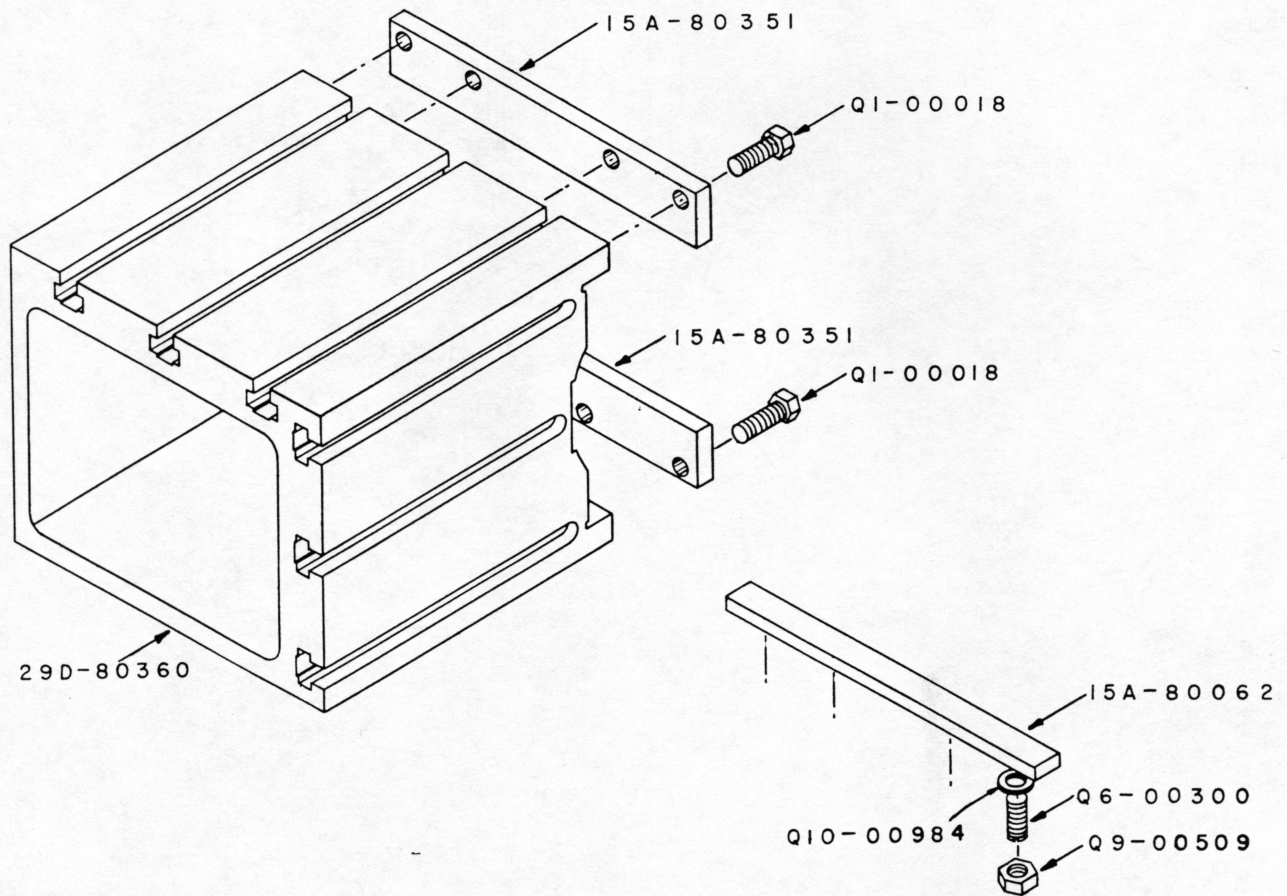
8-150W CABINET ASSEMBLY

B.M. 2-1047		DRWG. NO. 1C-80150W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
4D-80370	1	Cabinet	115	
8B-80341	1	Cabinet Cover	3	12
40A-31288	1	Motor Data Plate		3
41A-31140	1 ea.	Wire Black (Single Phase)		
		Wire White (Single Phase)		
		Wire Blue (Single Phase)	1	
		Wire Orange (Three Phase)		
		Wire Yellow (Three Phase)	1	
		Rd. Hd. Screws 1/4-20 x 3/8		3
Q4-00480	5	Washer		3
Q10-00540	3	Flexible Conduit	2	
Q16-00390	1	Conduit Connectors		3
Q16-01189	2	Lock Nut		3
Q16-01193	1	Motor Starter (Single Phase)	1	
Q16-01210	1	Motor Starter (Three Phase)	1	3
Q16-01211	1			



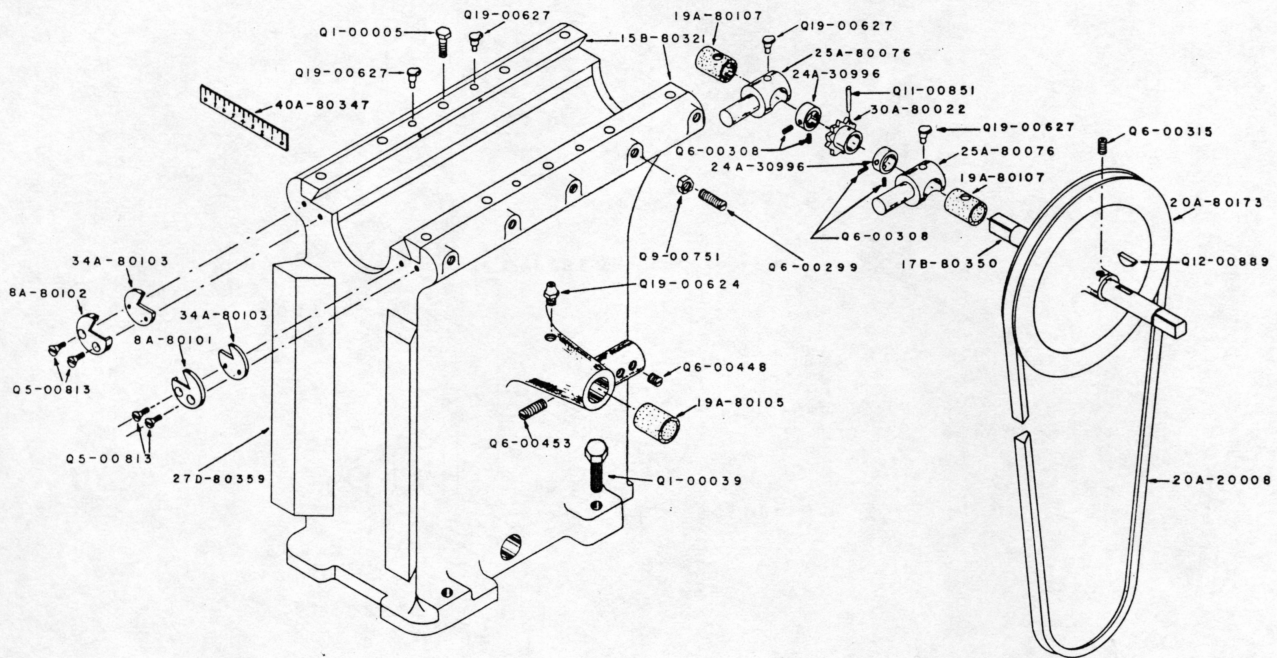
8-5W SADDLE ASSEMBLY

B.M. 2-1048		DRWG. NO. 1C-80005W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
11D-80004	1	Saddle	23	
15A-80093	1	Saddle Gib		10
16A-80020	1	Feed Screw Nut		9
16A-80083	1	Cross Feed Screw		8
16A-80099	2	Crossfeed Screw Nut		3
16A-80316	1	Table Screw Nut		9
24A-80100	1	Thrust Washer		3
24A-80372	1	Trust Collar		3
33A-80373	1	Dial		3
Q1-00065	1	Hex. Cap Screw 1/2-13 x 7/8		3
Q2-00263	2	Soc. Hd. Cap Screw 5/16-18 x 1 1/4		3
Q6-00299	2	Set Screw 5/16-18 x 1 1/4		3
Q6-00306	1	Sq. Hd. Set Screw 10-32 x 1/4		3
Q6-00346	2	Sq. Hd. Set Screw 5/16-18 x 1 1/4		3
Q9-00509	4	Jam Nut		3
Q11-00850	1	Taper Pin		3



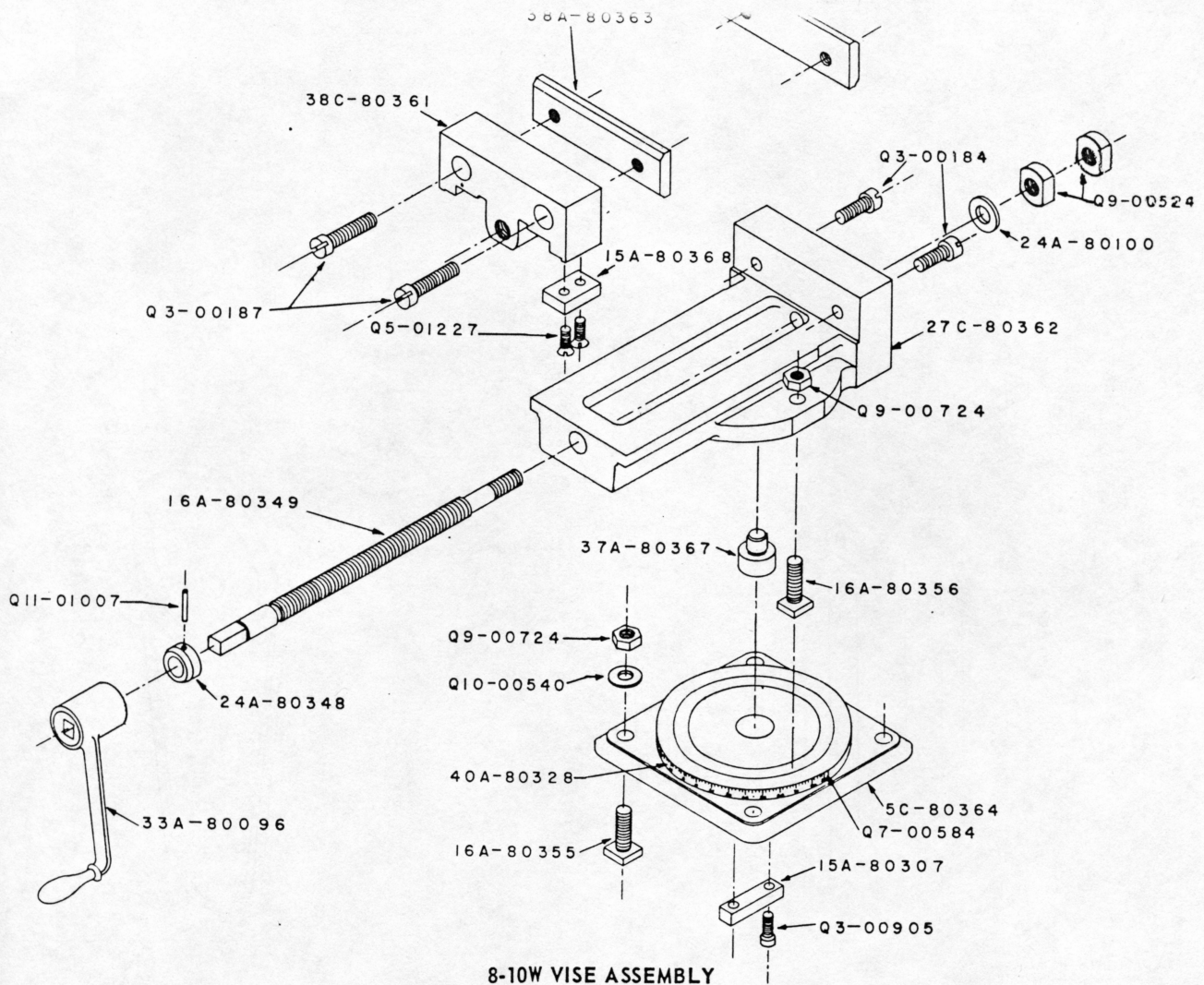
8-3W TABLE ASSEMBLY

B.M. 2-19		DRWG. NO. 1C-80003W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
15A-80062	1	Table Gib		9
15A-80351	2	Table Gib (Upper & Lower)	15	
29D-80360	1	Table	64	
Q1-00018	8	Hex. Hd. Cap Screw 5/16-18		3
Q6-00300	4	Set Screw 5/16-18 x 1 1/4		3
Q9-00509	4	Jam Nuts		3
Q10-00984	4	Washer		3



8-2W MAIN FRAME ASSEMBLY

B.M. 2-1051				DRWG. NO. 1D80002W					
PART NO.	QUAN.	DESCRIPTION	SHIP. WT.		PART NO.	QUAN.	DESCRIPTION	SHIP. WT.	
			LBS.	OZS.				LBS.	OZS.
8A-80101	1	Wiper Cover Right		3	Q1-00005	10	Hex. Hd. Cap Screw 1/4-20x1 ...		3
8A-80102	1	Wiper Cover Left		3	Q1-00039	4	Hex. Hd. Cap Screw 3/8- 16 x 1 3/4		3
15B-80321	2	Gib	2	8	Q5-00813	4	Flat Hd. Screw 3-32 x 3/8		3
17B-80350	1	Jack Shaft	2	6	Q6-00299	5	Set Screw 5/16-18 x 1		3
19A-80105	2	Bushing		3	Q6-00308	4	Soc. Set Screw 1/4-20 x 3/16		3
19A-80107	2	Bushing		5	Q6-00315	1	Set Screw 5/16-18 x 3/8		3
20A-20008	1	Vee Belt		8	Q6-00448	4	Set Screw 5/16-18 x 3/8		3
20A-80173	1	Drive Pulley	2	7	Q6-00453	2	Set Screw 5/16-18 x 11/4		3
24A-30996	2	Collar		4	Q9-00751	5	Jam Nut		3
25A-80076	2	Bearing Supports	1	4	Q11-00851	1	Taper Pin		3
27D-80359	1	Frame	75		Q12-00889	1	Woodruff Key		3
30A-80022	1	Sprocket Drive		4	Q19-00624	1	Grease Fitting		3
34A-80103	2	Felt Wiper		3	Q19-00627	6	Oil Cup Cover		3
40A-80347	1	Ram Scale	1						



B.M. 2-1050		DRWG. NO. 1D-80010W		
PART NUMBER	QUANTITY	DESCRIPTION	SHIPPING WEIGHT	
			LBS.	OZS.
5C-80364	1	Vise Base	14	2
15A-80307	1	Key		3
15A-80368	2	Gib		8
16A-80099	2	Nuts		3
16A-80349	1	Vise Screw		10
16A-80355	4	Tee Bolt		3
16A-80356	2	Tee Bolt		3
24A-80100	1	Thrust Washer		3
24A-80348	1	Collar		3
27C-80362	1	Vise Frame	5	2
33A-80096	1	Crank Handle	1	
37A-80367	1	Axis Pin		4
38A-80363	2	Vise Jaw Face		13
38C-80361	1	Movable Vise Jaw		15
40A-80328	1	Scale	4	
Q3-00184	2	Fill. Hd. Cap Screw		4
Q3-00187	2	Fill. Hd. Cap Screw		3
Q3-00905	2	Fill. Hd. Machine Screw		3
Q5-01227	4	Soc. Hd. Cap Screw		5
Q7-00584	3	Pin		3
Q9-00724	6	Jam Nut		3
Q10-00540	4	Washer		3
Q11-01007	1	Roll Pin		3