

DESCRIPTION OF MACHINES

Cylinder bed machines P300-2/201, P300-2/206 and P300-2/406 perform high speed, double locked stitch type 401 on a wide variety of medium and heavy weight fabrics.

General Features

Cylinder bed overhangs base, allowing tubular work to be stitched.

Sliding cover encloses elliptical bed.

Arm shaft is mounted with ball bearing in front and rear.

Belt driven bed shaft is mounted in ball bearing at rear and needle bearing in front.

Machine base also serves as a drip pan with a glass, oil-sump jar.

Face plate is hinged to facilitate threading and oiling.

All threading is done on operator's side of machine.

Vibrating looper thread take-up is non-winding.

Needle bar connecting link, needle bar rock frame, needle bar rock frame driving connection and spreader driving connection are all mounted on needle bearings.

Needle bar stroke: 1-1/4 inches.

Presser bar lift: 3/8 inch.

Bed Dimensions: 16-3/4 inches long, 7 inches wide. Top of bed is 7 inches above table.

Space at right of needle bar: 10 inches.

Space at left of needle bar to edge of bed: 2-1/4 inches.

Federal stitch type 401.

Special Features of Individual Machines

MACHINE P300-2/201

Two needles, two loopers.

Combination of needle feed and drop feed prevents the slipping of the upper and lower plies of material and assists in two or more plies being fed evenly.

Maximum stitch length: 4 per inch.

MACHINE P300-2/206

Two needles, two loopers.

Puller Feed-Combination of needle feed and continuous close coupled gear driven puller feed.

Length of stitch: 4 to 12 per inch (regularly fitted for 9 stitches per inch).

Made in gauges from 3/16 inch to 2 inches. Standard gauges are 1 inch, 1-3/8 inches and 1-1/2 inches.

MACHINE P300-2/406

Four needles, four loopers.

Puller Feed-Combination of needle feed and continuous close coupled gear driven puller feed.

Length of stitch: 4 to 12 per inch (regularly fitted for 9 stitches per inch).

Standard gauges are 5/16, 5/16, 5/16 inch, 3/8, 3/8, 3/8 inch, 1/2, 1/2, 1/2 inch and 1/4, 1, 1/4 inch. Minimum spacing between any two adjacent needles is 3/16 inch.

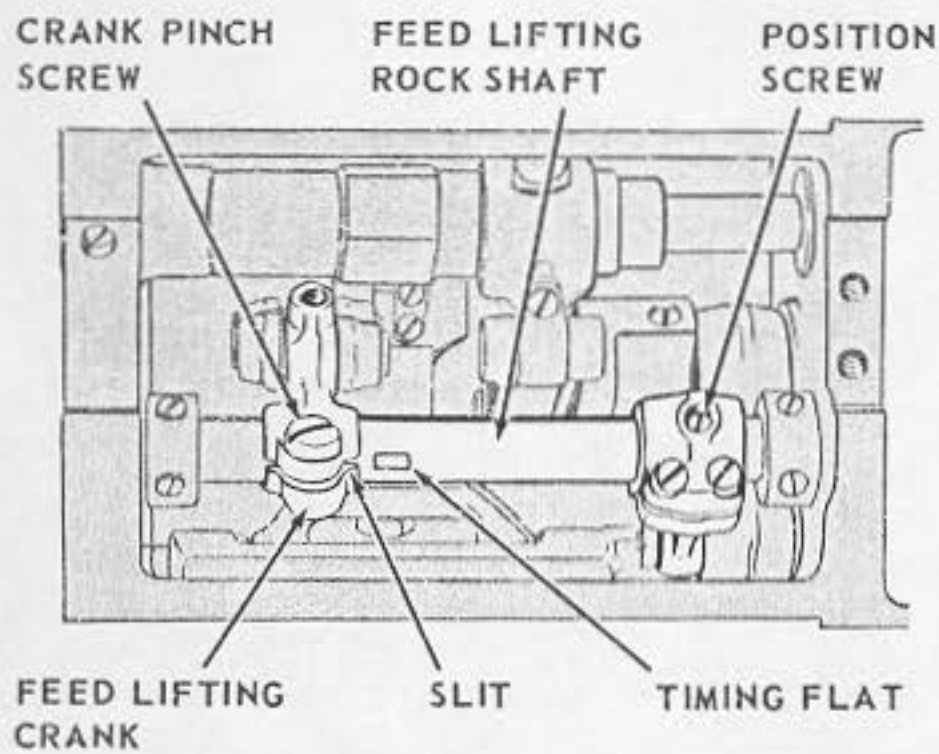


Fig. 23. Feed Bar Height Setting

FEED BAR HEIGHT SETTING P300-2/201

When feed bar is at correct height, the slit in the feed lifting crank is aligned with the timing flat on feed lifting rock shaft as shown in Fig. 23.

If adjustment is required, first be sure that the feed lifting rock shaft crank position screw engages the rock shaft spot correctly.

Then loosen feed lifting crank pinch screw and align slit of feed lifting crank with timing flat on feed lifting shaft. Re-tighten crank pinch screw.

FEED DOG ADJUSTMENT P300-2/201

Lengthwise Setting

The feed dog is correctly adjusted when its movement is centralized between forward and rear ends of throat plate.

For adjustment, loosen position screw and set screw, Fig. 24, and move rock frame forward or backward to centralize the movement of the feed dog in the throat plate. Re-tighten set screw and position screw.

Sidewise Setting

The feed dog should clear the sides of the throat plate with approximately the same distance on both sides. If adjustment is required, loosen position screw and set screw shown in Fig. 24 and feed lifting crank pinch screw shown in Fig. 23 and move assembly to correct position.

Height Setting

The feed dog, at its highest position, should be limited to the projection of the full depth of teeth above the throat plate. It should be at its highest position when the needle is at its lowest position.

For adjustment, loosen feed dog shank screw shown in Fig. 25. To raise feed dog, turn feed dog shank adjusting screw, Fig. 25, down. To lower feed dog, turn feed dog shank adjusting screw up.

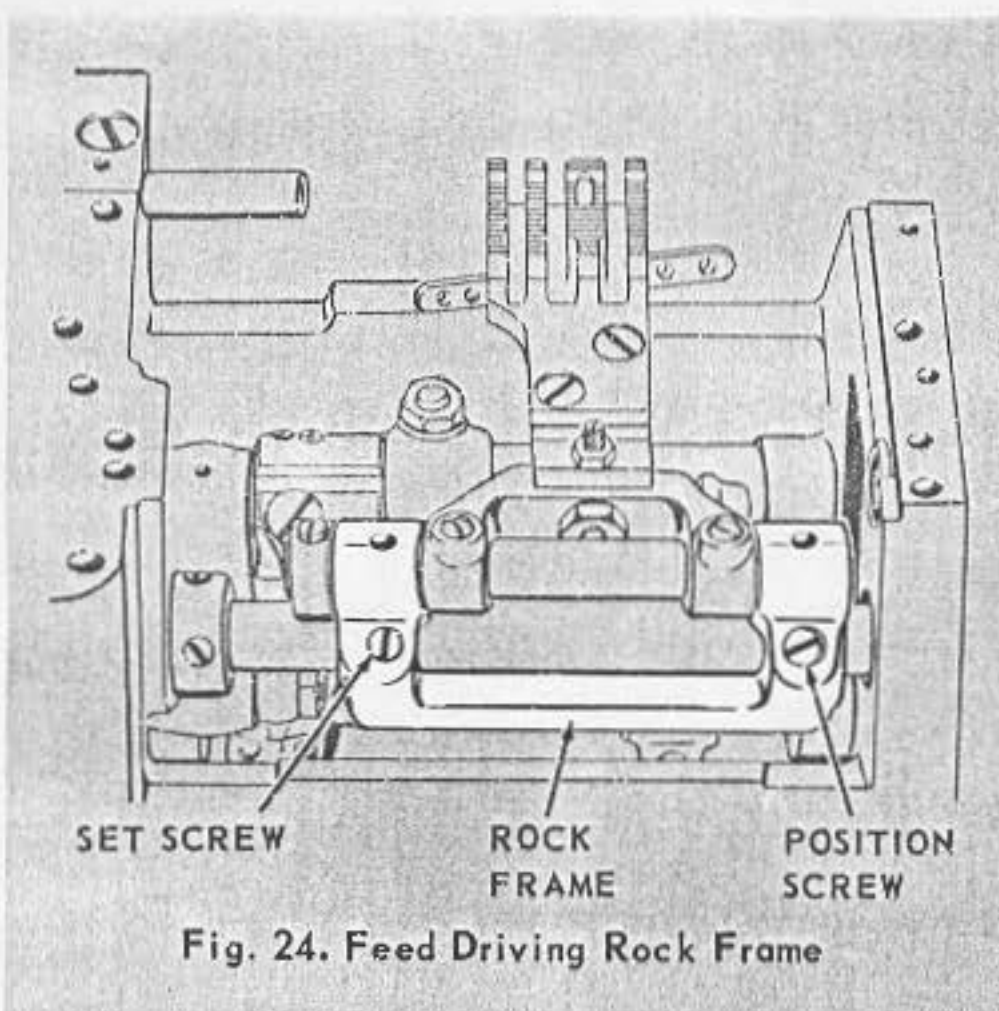


Fig. 24. Feed Driving Rock Frame

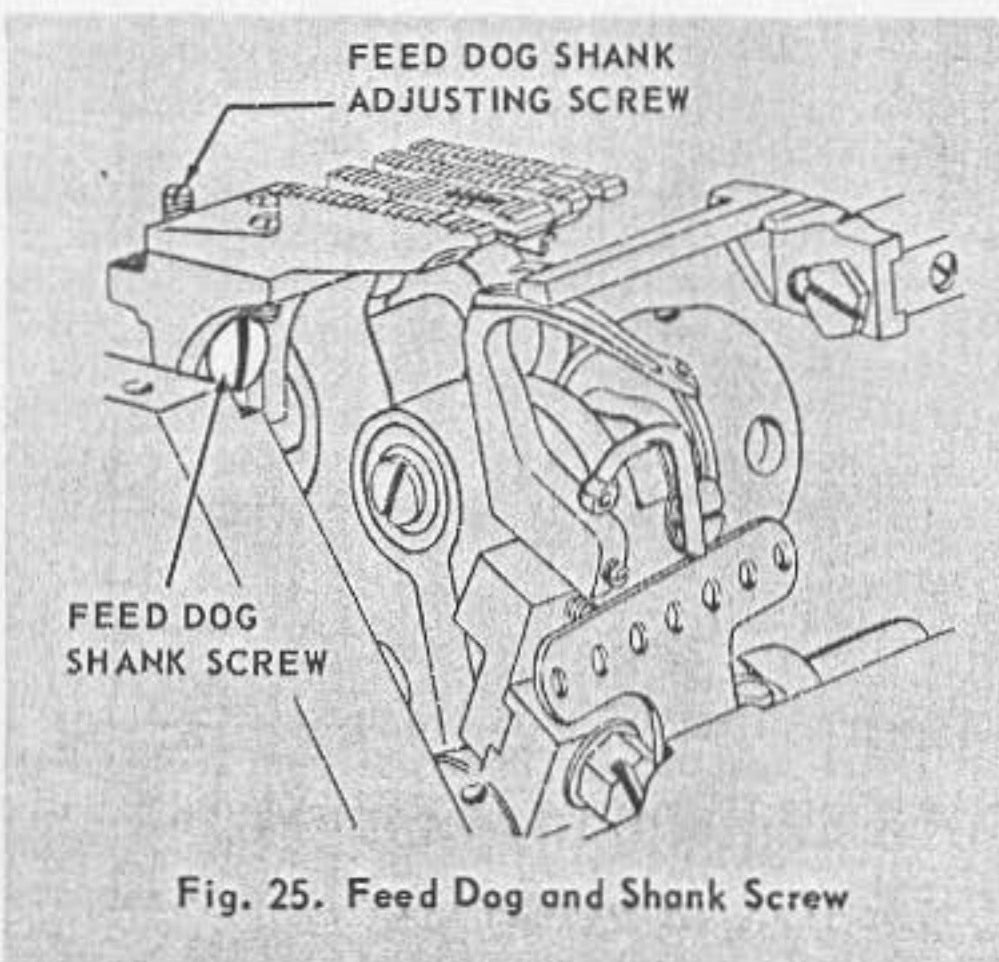


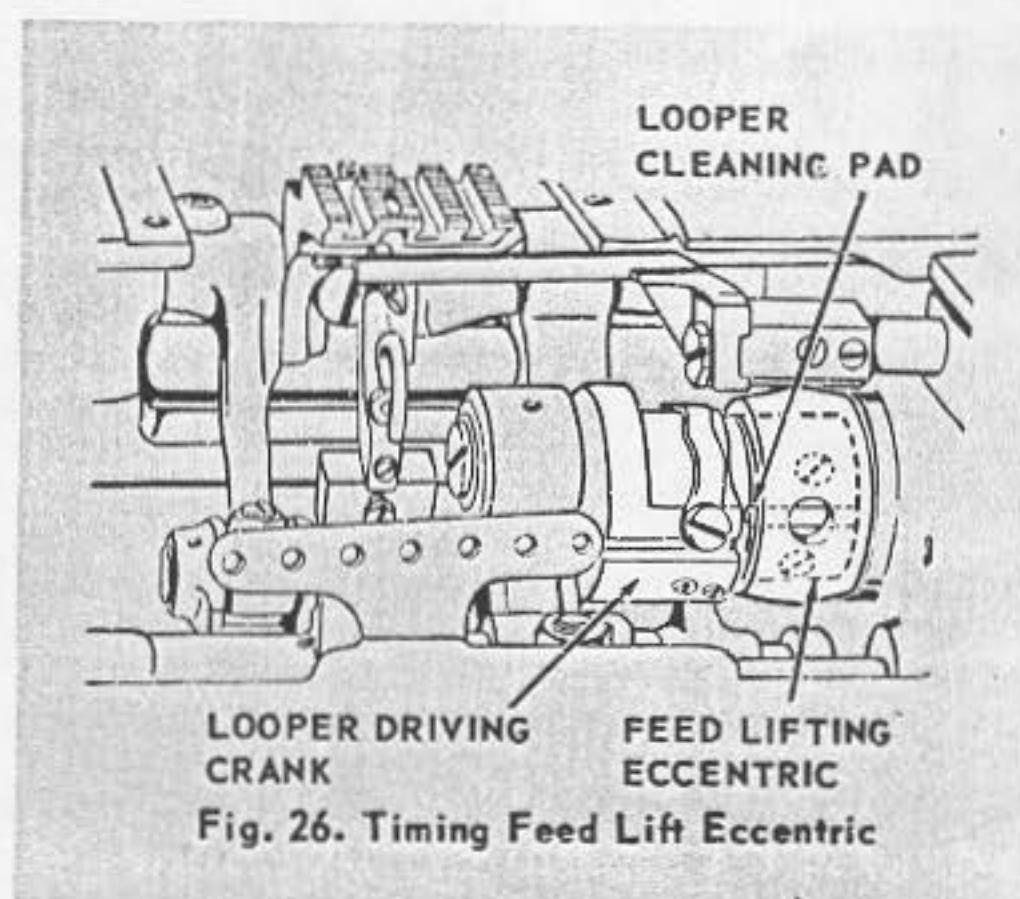
Fig. 25. Feed Dog and Shank Screw

TIMING FEED LIFT ECCENTRIC (P300-2/201)

The feed lifting eccentric shown in Fig. 26 can be adjusted to permit the teeth of the feed dog to remain below the throat plate until the needle penetrates the material.

It is correctly adjusted when the edge of the looper driving crank lines up with the edge of the lubricating pad on the feed lifting eccentric as shown in Fig. 26.

Set screws, accessible through hole in feed driving connection, allow for adjustment when required.



POSITIONING LOOP DEFLECTOR (P300-2/201)

Loop deflector, located on underside of feed dog, is correctly positioned when there is approximately a 1/32 inch clearance between needle and loop deflector as shown in Fig. 27.

Loop deflector screws shown in Fig. 27 allow for adjustment when required.

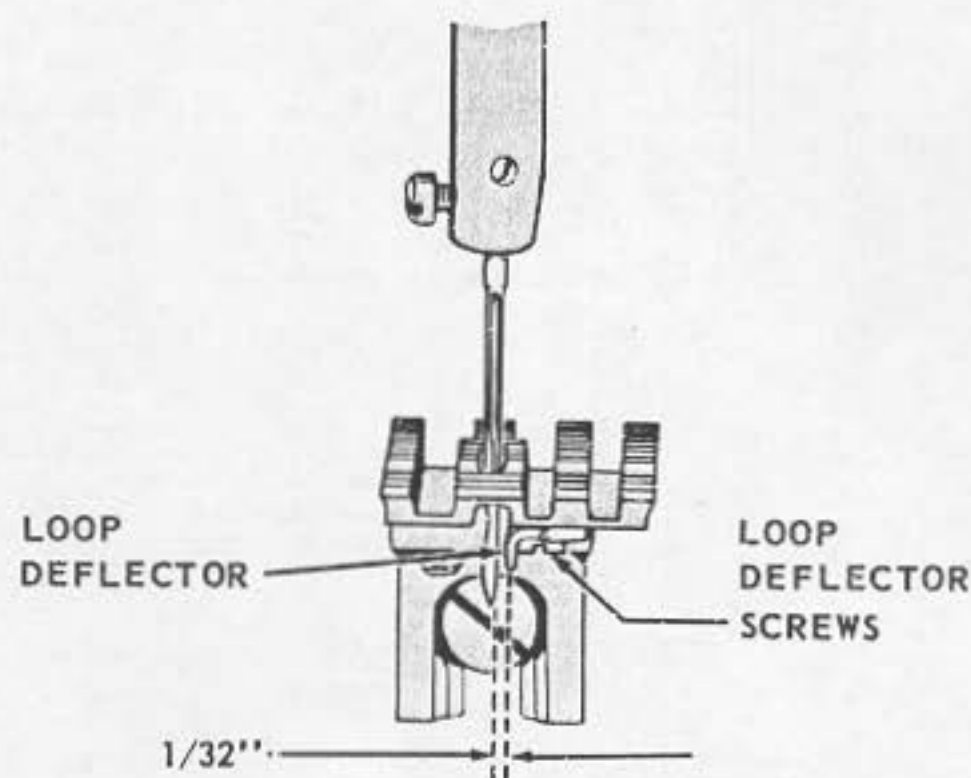


Fig. 27. Positioning Loop Deflector

SETTING THE NEEDLE GUARDS

The needle guards are correctly set when the needles pass them as close as possible without hitting.

To adjust, turn machine pulley over toward operator until points of loopers are about to pass needles on their forward stroke.

Loosen needle guard set screws shown in Fig. 28 and turn needle guards as close as possible to the needles without touching. Tighten set screws.

Check by springing the needles to the left while turning the machine pulley to make certain that the looper points do not strike the needles.

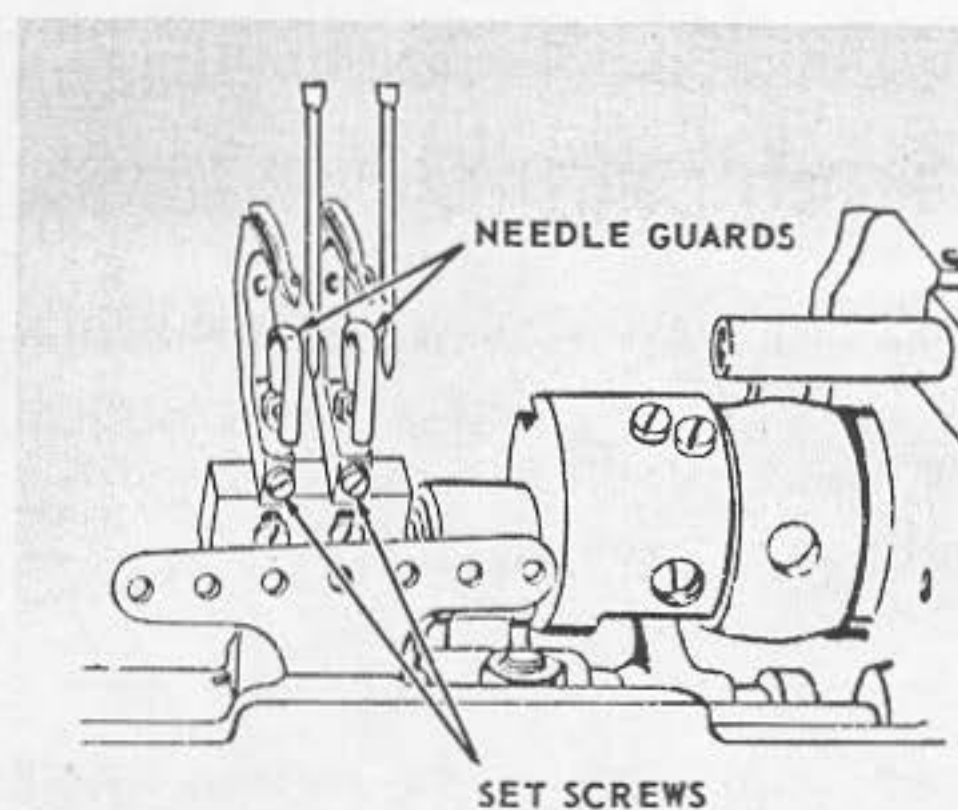


Fig. 28. Setting the Needle Guards

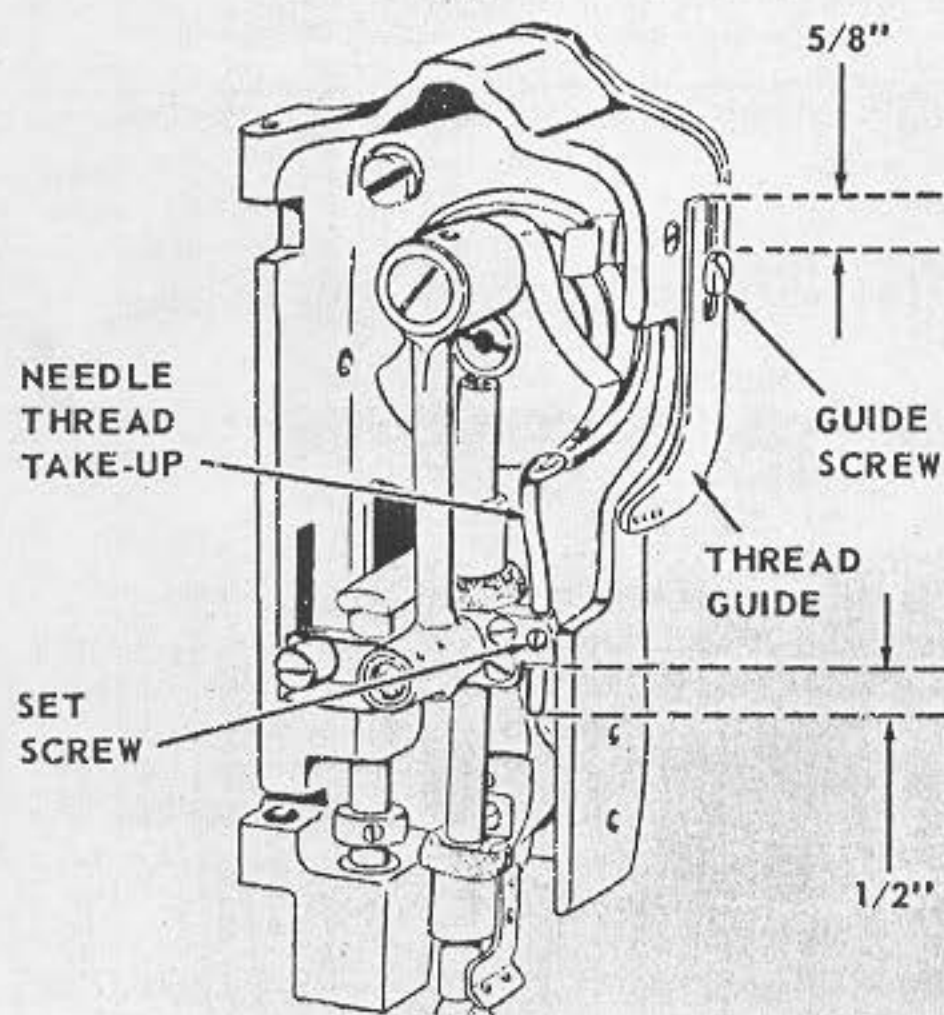


Fig. 29. Needle Thread Take-up

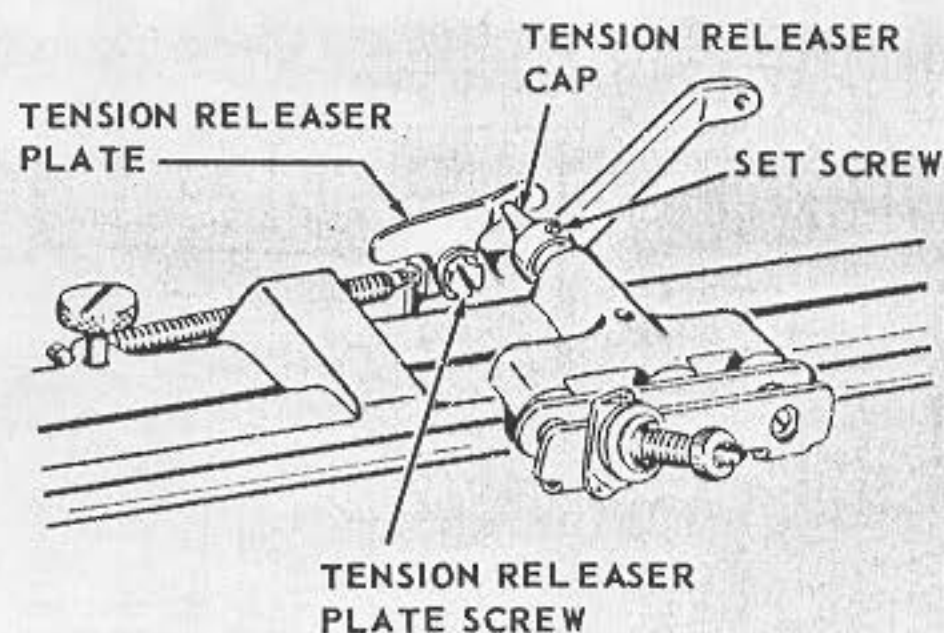


Fig. 30. Needle Thread Tension Releaser

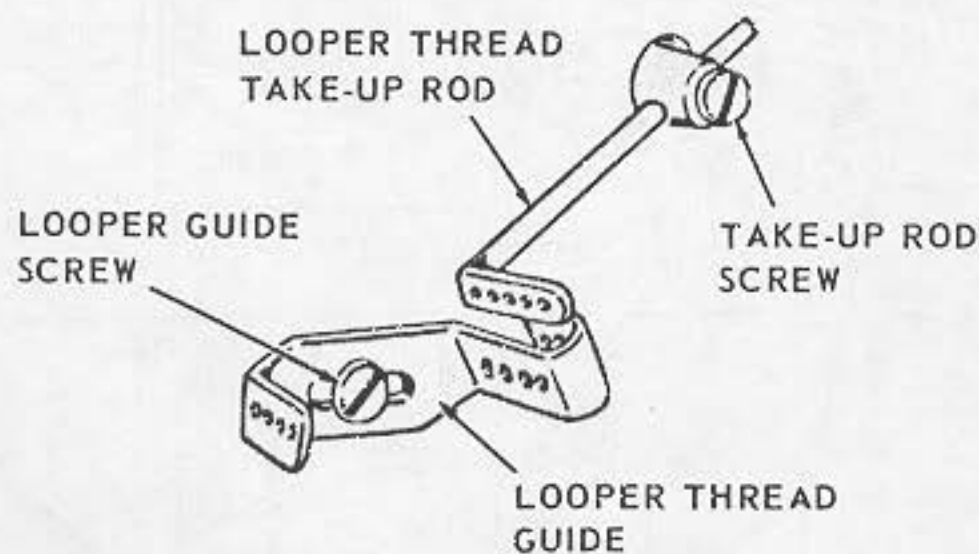


Fig. 31. Looper Thread Take-up

ADJUSTING NEEDLE THREAD TAKE-UP

The needle thread take-up and thread guide may be adjusted to increase or decrease the amount of thread drawn at the top of the needle bar stroke. To increase the amount, loosen thread take-up set screw, Fig. 29, and raise take-up (or loosen guide screw and lower guide). To decrease the amount, reverse the adjustment by lowering the take-up or raising the guide.

For average sewing conditions, the guide should be set with upper end 5/8 inch above the guide screw as shown in Fig. 29. The thread take-up should be set with the lower end 1/2 inch below the bottom of its holder.

ADJUSTING NEEDLE THREAD TENSION RELEASER

When correctly adjusted, the tension releaser should release tension on needle thread when the presser foot is about 1/4 inch above throat plate. To adjust, loosen set screw, Fig. 30 and move tension releaser cap out for earlier release of tension, or in for later release. Tighten set screw. Tension releaser plate, Fig. 30, may also be adjusted to release tension at proper time.

ADJUSTING LOOPER THREAD TAKE-UP

The looper thread take-up and guide may be adjusted for handling more or less thread, according to thickness of material and length of stitch, and to change the ratio of looper thread in the finished stitch.

To change the amount of thread handled, loosen looper thread guide screw, Fig. 31 and looper thread take-up rod screw. Move thread guide and take-up rod to the left for more thread take-up, or to the right for less thread take-up. Tighten the two set screws making certain that the take-up rod passes through the center of the guide yoke.

To change the ratio of looper thread in finished stitch, loosen thread guide screw, Fig. 31, and lower the yoke (right end) of the thread guide for more thread. For less thread, raise right end of guide. Hold in position and tighten guide screw.

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

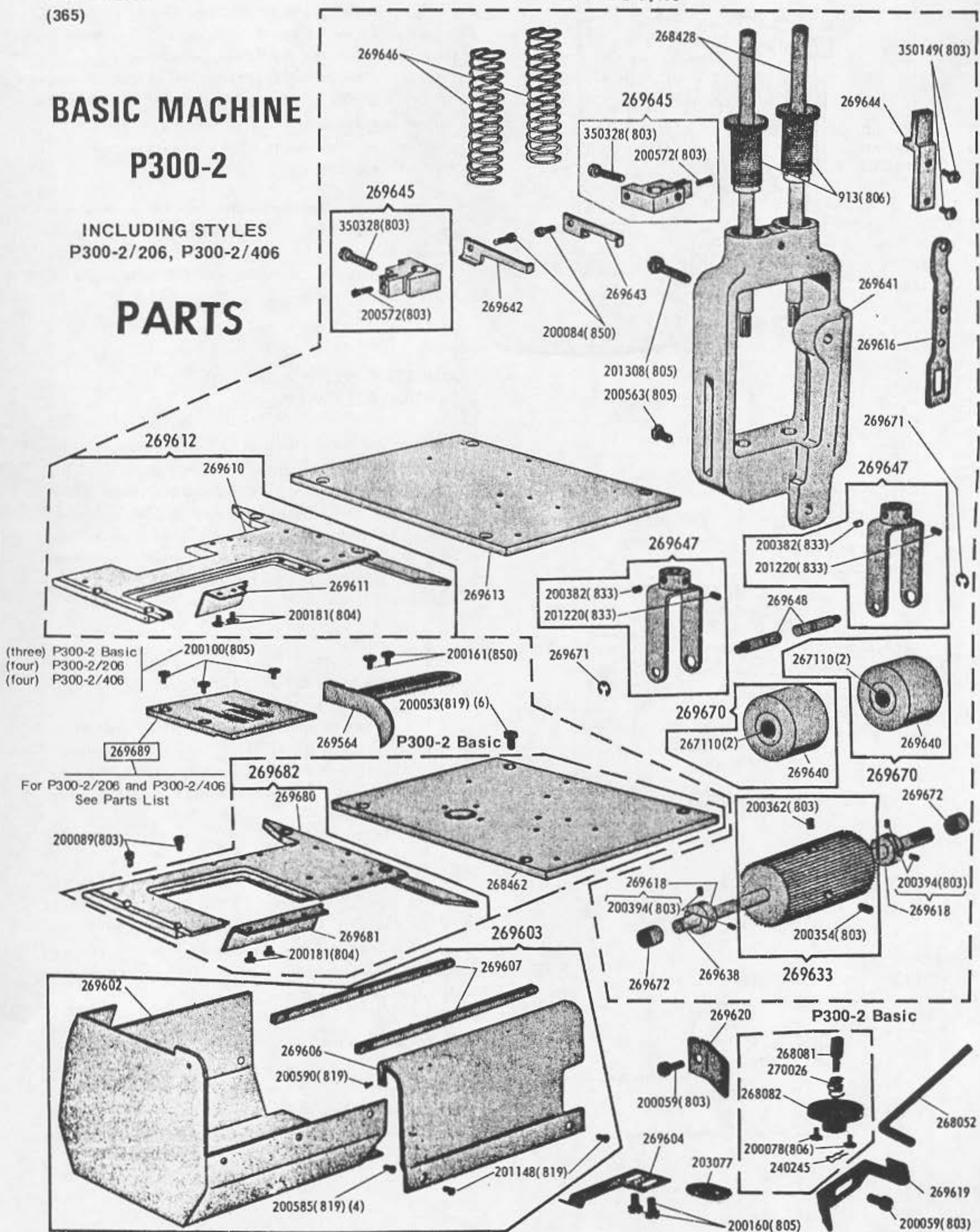
FORM P21367
(365)

P300-2/206,406

BASIC MACHINE P300-2

INCLUDING STYLES
P300-2/206, P300-2/406

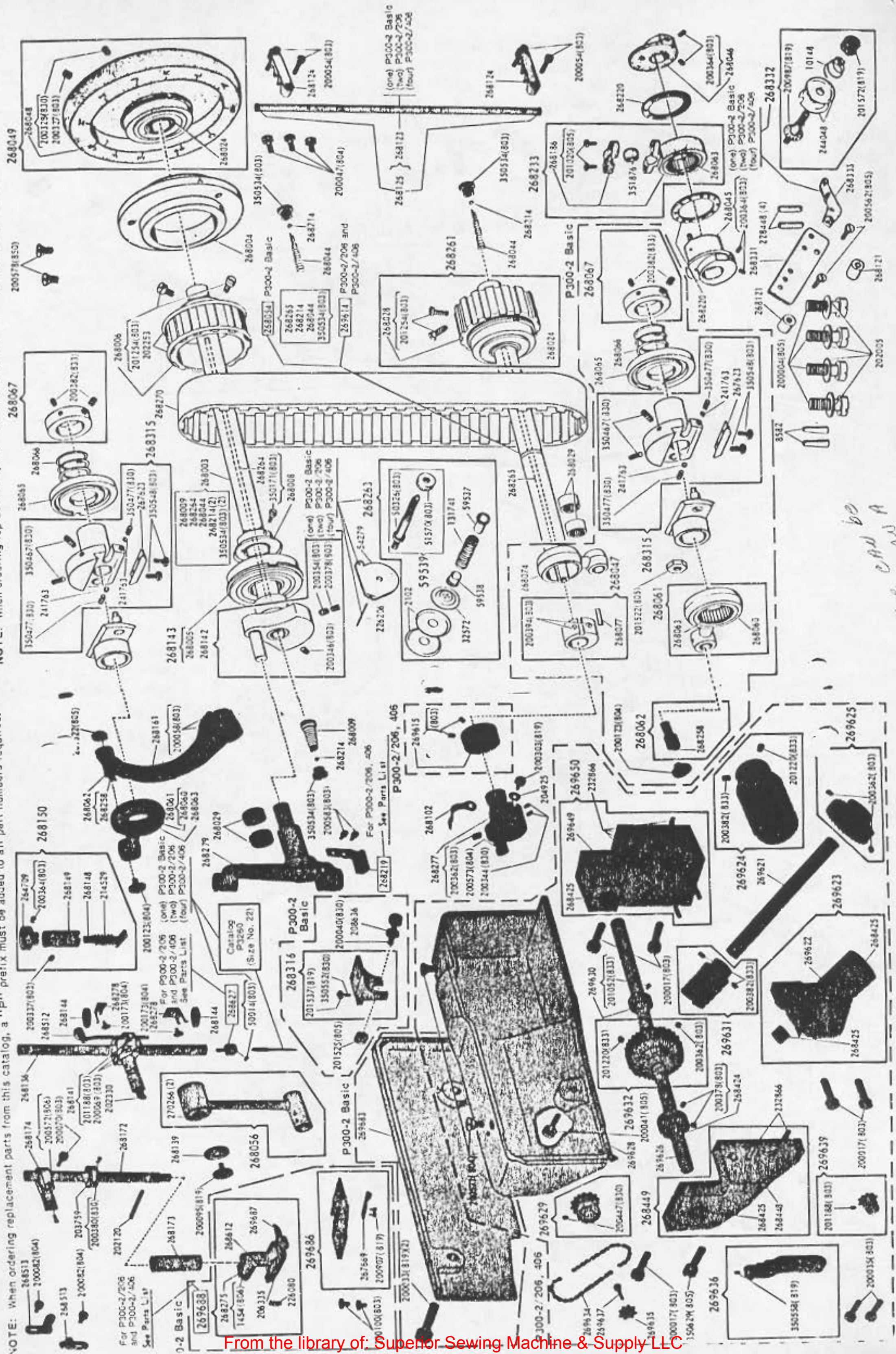
PARTS



[illegible]

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.



This page is a copy of the original.

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

NUMERICAL LIST OF PARTS MACHINES P300-2 Basic, P300-2/206 AND P300-2/406

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
1454(806)	Pressor Foot Shank	200160(805)	Bed (elliptical)	200578(850)	Looper Thread Guide	204348	Foot Lifter Lever
2102	Pinch Screw (P300-2 Basic)		Cover Lock Spring		(top of Arm) Bracket		Spring
	Needle Thread Tension	200161(850)	Screw(2)		Screw(2)	204365	Needle Thread Tensi
Catalog	Disc(2)	200173(804)	Edge Guide Screw(2)	200583(803)	Needle Bar Rock		Releaser Spring
3260	Needle (62x57) Size No.		Needle Bar Oiling		Frame Thread Guide	204925	Looper Driving Crank
	22		Felt Holder Screw(2)		Screw(2)		Oil Hole Cover Screw
8582	Arm Position Pin(2)	200181(804)	Bed Plate (left)	200585(819)	Bed (elliptical) Cover	204925	Washer
10148	Looper Thread Tension		Guard Screw(2)		Slide Bar Screw(4)	206335	Spreader Screw Wash
	Spring	200226(805)	Presser Bar Spring				Pressor Foot Hinge
			Support Screw	200590(819)	Bed (elliptical) Cover		Pin (P300-2 Basic)
32572	Needle Thread Tension	200303(819)	Looper Driving Crank		Section (front) Screw	208636	Looper Holder Scr. w
	Releasing Disc		Oil Hole Cover Screw		(upper)		Washer
50014(803)	Needle Set Screw	200327(803)	Machine Pulley Set	200907(819)	Loop Deflector	214529	Needle Bar Rock
50326(803)	Needle Thread Tension		Screw		Screw(2) (P300-2 Basic)		Frame Regulating
	Stud	200328(830)	Machine Pulley				Stud Spring
51570(803)	Needle Thread Tension		Position Screw	200934(806)	Foot Lifter Lifting	214529	Presser Bar Spring
	Thumb Nut	200337(803)	Needle Bar Rock		Link Hinge Screw		Cushion Spring
54279	Needle Thread Tension		Frame Regulating Stud	200987(819)	Looper Thread Tension	226080	Pressor Foot Plate
	Thread Guide (double)		Sleeve Set Screw		Stud		Spring (P300-2 Basic)
59537	Needle Thread Tension	200344(830)	Looper Driving Crank	201020(805)	Spreader Driving	226206	Needle Thread Tensi
	Spring Bushing (front)		Position Screw(2)		Connection Cap		Releasing Pin
59538	Needle Thread Tension	200346(803)	Needle Bar Crank		Screw(2)	228448	Machine Locating Stud
	Spring Bushing (back)		Set Screw	201052(833)	Needle Thread Tension		(4)
59539	Needle Thread Tension	200354(803)	Needle Bar Crank		Releaser Cap Set	238089	Needle Thread Tensi
	Stud 50326(803) with		Position Screw		Screw		Releasing Plate Pin
	51570(803)	200362(803)	Looper Driving Crank	201148(819)	Bed (elliptical) Cover	241763	Needle Bar Rock Fram
67425	Looper Carrier Crank		Set Screw		Section (front) Screw		Driving Eccentric
	Clamping Stud Nut	200364(803)	Needle Bar Rock	201160(805)	(lower)(2)		Friction Plate Screw
	Washer		Frame Regulating Stud		Spring Screw Eye		Set Screw Packing
131741	Needle Thread Tension	200364(803)	Cap Set Screw	201188(803)	Needle Thread Guide		(brass) (2)
	Spring		Spreader Driving		(on Needle Bar	244048	Looper Thread Tensi
141220(869)	Needle Guard Set Screw	200364(803)	Eccentric Counter-		Connecting Stud)		Disc(2)
200004(805)	Arm Screw(4)		balance Set Screw(2)		Set Screw	263572	Spreader Driving Rock
			Spreader Driving	201254(803)	Arm Shaft Connection		Shaft Screw Stud Oil
200029(805)	Arm Head Screw(3)	200373(803)	Eccentric Set Screw(2)		Belt Pulley Set		Packing (wick)
200033(819)	Bed Side Cover (back)		Spreader Driving		Screw(2)	264709	Needle Bar Rock
	Screw(2) (P300-2 Basic)	200378(803)	Crank Position Screw	201254(803)	Bed Shaft Connection		Frame Regulating Stud
200035(805)	Spreader Bar Bearing		Needle Bar Crank		Belt Pulley Set		Cap with 200364(803)
	Screw(2)		Position Screw Check		Screw(2)	267623	Needle Bar Rock Fram
200047(804)	Arm Shaft Ball	200380(830)	Screw	201363(803)	Foot Lifter Lever		Driving Eccentric
	Bearing (back) Housing		Collar Set Screw		Hinge Screw	267669	Friction Plate
200047(805)	Needle Thread Tension	200380(830)	Spreader Holder Set	201416(830)	Face Plate Hinge Set		Loop Deflector
	Bracket Screw(2)		Screw(2)		Screw(2)	268003	(P300-2 Basic)
200053(819)	Bed Plate Screw(6)	200382(833)	Needle Bar Rock	201418(803)	Looper Carrier Shaft		Arm Shaft with
200054(803)	Looper Thread Tube		Frame Driving		Set Screw		268009, 268044,
	Clamp Screw(4)		Eccentric Adjusting	201522(805)	Needle Bar Rock		268264, two each
200058(803)	Needle Bar Rock Frame		Disc Spring Collar		Frame Driving		268214 and 350534(803)
	Driving Arm Pinch		Set Screw(2)		Connection Hinge Stud	268004	Arm Shaft Ball Bearin
200059(803)	Looper Thread Guide	200386(803)	Bed Shaft Thrust		Nut		(back) Housing
	(on Bed) (on front)		Collar Set Screw(2)	201524(805)	Looper Carrier Crank	268005	Arm Shaft Ball Bearin
	Screw		(P300-2/206, 406)		Clamping Stud Nut		(front)
200059(803)	Looper Thread Guide	200386(803)	Spreader Driving Rock	201572(819)	Looper Thread Tension	268006	Arm Shaft Connection
	(on Bed) (under cover)		Shaft Collar Set		Thumb Nut		Belt Pulley with two
	Screw		Screw(4)	201736(805)	Spreader Driving Rock		each 201254(803) and
200064(806)	Looper Thread Take-				Shaft Screw Stud Nut	268008	202253
	up Rod Set Screw	200394(803)	Looper Carrier Shaft				Arm Shaft Oil Slinger
200069(803)	Needle Bar Connecting		Collar Set Screw(2)	202005	Arm Screw Washer(4)		with 350171(803)
	Stud Pinch Screw(2)	200394(803)	Looper Carrier	202120	Foot Lifter Lifting	268009	Arm Shaft Oil Stop
200070(803)	Presser Bar Guide		Shaft Set Screw Check		Link Stop Pin		Ball Spring (front)
	Bracket Pinch Screw		Screw	202253		268010	Arm Side Cover
200078(805)	Arm Side Cover	200403(830)	Spreader Driving		Arm Shaft Connection		
	Screw(3)		Crank Set Screw		Belt Pulley Spring	268024	Arm Shaft Ball
200082(804)	Needle Thread Guide				Flange(2)		Bearing (back)
	Screw(3)	200541(805)	Needle Thread Tension	202330	Needle Bar Connecting	268024	Bed Shaft Ball
200089(803)	Bed Plate (left)		Releasing Plate Screw		Stud Oil Packing (wick)		Bearing
	Screw(2)			203077	Bed (elliptical) Cover	268028	Bed Shaft Connection
200089(803)	Looper Carrier Crank	200562(805)	Looper Thread Tension		Lock Spring Screw		Belt Pulley with two
	Hinge Pin Pinch Screw		Bracket Screw(2)		Washer		201254(803)
200095(819)	Needle Bar Connecting	200571(850)	Face Plate Lock	203349	Needle Thread Tension	268029	Bed Shaft Needle
	Link Cap Washer Screw		Spring Screw(2)		Releasing Plate Screw		Bearing(2)
200100(805)	Throat Plate Screw	200572(806)	Presser Bar Guide		Washer	268029	Needle Bar Rock Fram
			Bracket Adjusting	203759	Presser Bar Stop		Needle Bearing(2)
200123(804)	Needle Bar Rock Frame	200573(804)	Screw		Collar with 200380(830)	268030	Face Plate with
	Driving Connection Cap		Looper Driving Crank	204235	Arm Head Position Pin		268033 and two
	Screw		Oil Stop Screw			268032	201416(830)
							Face Plate Lock Spring

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
268033	Face Plate Lock Stud	268099	Looper Carrier Needle Bearing(2)	268208	Looper Carrier Crank Hinge Pin with 268258	268369	Looper with 141220(869)
268044	Arm Shaft Oil Stop Ball Spring (rear)	268099	Looper Driving Connection Needle Bearing	268214	Arm Shaft Oil Stop Ball 5/32 in. diam.(2)	268370	Looper and Needle Guard complete, 268310 and 268369
268044	Bed Shaft Oil Stop Ball Spring	268102	Looper Driving Crank Oil Hole Cover	268214	Bed Shaft Oil Stop Ball 5/32 in. diam.	268373	Looper Thread Guide (on Bed at Looper)
268045	Spreader Driving Eccentric with two 200364(803)	268121	Looper Thread Tension Bracket Spacing Collar(2)	268216	Looper Driving Connection 268098 with 268099		
268046	Spreader Driving Eccentric Counter-balance with two 200364(803)	268121	Needle Thread Tension Bracket Spacing Collar(2)	268219	Needle Bar Rock Frame Thread Guide (P300-2 Basic)	268462	Bed Plate (right) (P300-2 Basic)
268048	Machine Pulley (aluminum alloy casting) for "V" belt (outside diam of belt groove 2.9 in.) with 200327(803) and 200328(830)	268123	Looper Thread Tube with two 268125	268220	Spreader Driving Eccentric Thrust Washer(2)	268512	Needle Thread Guide (on Needle Bar Connecting Stud)
268049	Machine Pulley 268048 with 268024	268124	Looper Thread Tube Clamp(2)	268233	Spreader Driving Connection 268186 with 268063 and 351876	268513	Needle Thread Guide (on side of Arm)(2)
268052	Looper Thread Take-up Rod	268125	Looper Thread Tube Thread Bushing(2)			268514	Needle Thread Tension Bracket (P300-2/406)
268053	Spreader Driving Rock Shaft with 200064(806)	268136	Needle Bar	268258	Looper Carrier Crank Hinge Pin Oil Packing (wick)	268515	Needle Thread Tension Releaser (P300-2/406)
		268139	Needle Bar Connecting Link Cap Washer			268602	Looper Holder with two 350478(833) (P300-2 Basic)
		268141	Needle Bar Connecting Stud with 201188(803), 202330 and two 200069(803)	268258	Needle Bar Rock Frame Driving Connection Hinge Stud Oil Packing (wick)	268612	Pressor Foot Plate Heel Spring (P300-2 Basic)
268054	Bed Shaft with 268044, 268214, 268265, 350534(803), (P300-2 Basic)	268142	Needle Bar Crank with 200346(803), 200354(803) and 200378(803)	268261	Bed Shaft Connector Belt Pulley 268028 with 268024	268627	Needle Holder with 50014(803) (P300-2 Basic)
268056	Needle Bar Connecting Link with two 270266	268143	Needle Bar Crank 268142 with 268005	268263	Needle Thread Tension complete, 32572, 59537, 59538, 59539, 131741 and two 2102	268638	Spreader with Point (P300-2 Basic)
268060	Needle Bar Rock Frame Driving Connection	268144	Needle Bar Oiling Felt(2)				
268061	Needle Bar Rock Frame Driving Connection 268060 with 268063	268148	Needle Bar Rock Frame Regulating Stud	268264	Arm Shaft Oil Control Rod (wood)	269564	Edge Guide
268062	Needle Bar Rock Frame Driving Connection Hinge Stud with 268258	268149	Needle Bar Rock Frame Regulating Stud Sleeve	268265	Bed Shaft Oil Control Rod (wood)	269602	Bed (elliptical) Cover with Lock Stud
268063	Needle Bar Rock Frame Driving Connection Needle Bearing	268150	Needle Bar Rock Frame Regulating Stud complete, 214529, 264709, 268148 and 268149	268270	Arm Shaft Connection Belt (reinforced neoprene)	269603	Bed (elliptical) Cover complete, 200590(819), 269602, 269606, two each 201148(819), 269607 and four 200585(819)
268063	Spreader Driving Connection Needle Bearing	268161	Needle Bar Rock Frame Driving Arm with two 200058(803)	268275	Pressor Foot Shank with 1454(806) (P300-2 Basic)	269604	Bed (elliptical) Cover Lock Spring
268065	Needle Bar Rock Frame Driving Eccentric Adjusting Disc	268167	Needle Thread Tension Bracket (P300-2 Basic, 206)	268277	Looper Driving Crank with 200362(803), 200573(804) and two 200344(830)	269606	Bed (elliptical) Cover Section (front)
		268168	Needle Thread Tension Releaser (P300-2, Basic, 206)			269607	Bed (elliptical) Cover Slide Bar(2)
268066	Needle Bar Rock Frame Driving Eccentric Adjusting Disc Spring	268169	Needle Thread Tension Releaser Cap with 201052(833)	268278	Needle Bar Oiling Felt Holder(2)	269610	Bed Plate (left) (P300-2/206,406)
		268171	Needle Thread Tension Releasing Plate (Adjustable)	268307	Needle Bar Rock Frame	269611	Bed Plate (left) Guard (P300-2/206,406)
268067	Needle Bar Rock Frame Driving Eccentric Adjusting Disc Spring Collar with two 200382(833)	268172	Pressor Bar	268308	Looper Carrier Crank with 200089(803)	269612	Bed Plate (left) and Guard complete, 269610, 269611, and two 200181(804) (P300-2/206, 406)
		268173	Pressor Bar Bushing	268310	Looper Carrier Crank Clamping Stud	269613	Bed Plate (right) (P300-2/206, 406)
268071	Spreader Driving Rock Shaft Needle Bearing(2)	268174	Pressor Bar Guide Bracket with 200070(803) and 200572(806)	268312	Needle Guard	269614	Bed Shaft with 268044, 268214, 268265, 350534(803) (P300-2/206, 406)
		268176	Pressor Bar Spring	268315	Needle Thread Guide (on Arm Head)	269615	Bed Shaft Thrust Collar with two 200386(803), (P300-2/206, 406)
268072	Spreader Driving Rock Shaft Collar with two 200386(803)(2)	268181	Spreader Bar	268330	Face Plate Hinge Stud(2)	269616	Foot Lifter Lifting Link (P300-2/206, 406)
268083	Foot Lifter Bell Crank	268184	Spreader Bar Bearing	268331	Looper Thread Tension Bracket	269617	Looper Carrier Shaft
268085	Foot Lifter Lever with 238089	268185	Spreader Holder with two 200380(830)	268332	Looper Thread Tension complete, 10148 200987(819), 201572(819) and two 244048	269618	Looper Carrier Shaft Collar with two 200394(803)
268086	Foot Lifter Lever Rod			268333	Looper Thread Tension Thread Guide	269619	Looper Thread Guide (on Bed) (on front)
268087	Foot Lifter Lifting Link (P300-2 Basic)	268190	Spreader Driving Pin	268367	Looper Carrier	269620	Looper Thread Guide (on Bed) (under cover)
268098	Looper Driving Connection	268197	Face Plate Lock Spring Plate	268368	Looper Carrier 268367 with two 268099	269680	Bed Plate (left) (P300-2 Basic)
						269681	Bed Plate (left) Guard (P300-2 Basic)

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
269682	Bed Plate (left) and Guard complete, 269680, 269681 and two 200181(804) (P300-2 Basic)	269689	Throat Plate, for 269686 (P300-2 Basic)	350381(803)	Presser Bar Spring Adjusting Screw	350478(833)	Looper Adjusting Screw
269683	Bed Side Cover (back) (P300-2 Basic)	270266	Needle Bar Connecting Link Needle Bearing(2)	350466(803)	Spreader Driving Rock Shaft Screw Stud with 263572	350478(833)	Looper Set Screw
269687	Pressor Foot Plate (P300-2 Basic)	350013(803)	Foot Lifter Bell Crank Hinge Screw	350467(830)	Needle Bar Rock Frame Driving Flange Set Screw(2)	350534(803)	Arm Shaft Oil Stop Ball Screw(2)
269688	Pressor Foot (spring hinged) complete, 40 needle hole, 206335, 226080, 268275, 268612 and 269687 (P300-2 Basic)	350149(803)	Spreader Screw	350467(830)	Presser Bar Spring Adjusting Screw Set Screw	350534(803)	Bed Shaft Oil Stop Ball Screw
		350171(803)	Arm Shaft Oil Slinger Set Screw	350477(830)	Needle Bar Rock Frame Driving Eccentric Friction Plate Screw Set Screw(2)	350548(803)	Needle Bar Rock Frame Driving Eccentric Friction Plate Screw(2)
		350267(805)	Looper Holder Screw			351876	Spreader Driving Rock Shaft Screw Stud Ball Roller
		350318(805)	Looper Thread Guide (on Bed at Looper) Screw				

FITTINGS

STANDARD GAUGES	LOOPER HOLDER	NEEDLE BAR ROCK FRAME THREAD GUIDE	NEEDLE HOLDER	PRESSER FOOT (COMPLETE)	SPREADER	THROAT PLATE
P300-2/206						
3/4"	268105	268255	268154	269574	268376	269597
7/8"	268105	268255	268154	269574	268376	269651
1"	268106	268256	268156	269574	268377	269598
1-1/4"	268107	268268	268157	269577	268378	269597
1-3/8"					268378	269651
1-1/2"	268107	268268	268157	269577	268378	269598
1-3/4"	268282	268304	268158	269577	268379	269597
2"	268282				268379	
P300-2/406						
1/4, 1/4, 1/4"	269065	269138	269191	269237	269342	269597
5/16, 5/16, 5/16"	269065	269138	269192	269237	269342	269652
3/8, 3/8, 3/8"	269065	269138	269192	269237	269342	269652
1/2, 1/2, 1/2"	269065	269138	269193	269240	269342	269598
1/4, 1, 1/4"	269065	269138	269193	269240	269342	269598

When Ordering Fittings, State Gauge Required.

P300-2 Basic DROP FEED PARTS

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
200040(830)	Feed Dog Shank Screw	200382(833)	Feed Driving Eccentric Adjusting Disc Spring Collar Set Screw(2)	201525(805)	Feed Dog Shank Screw Lock Nut	268047	Feed Lifting Eccentric with 268077 and two 200394(803)
200061(833)	Feed Driving Rock Shaft Crank Pinch Screw(2)	200386(830)	Feed Driving Rock Shaft Collar Set Screw(4)	201537(819)	Feed Dog Shank Adjusting Screw Lock Nut	268060	Feed Driving Connection
200061(833)	Feed Lifting Rock Shaft Crank Pinch Screw(2)	200386(803)	Feed Lifting Rock Shaft Collar Set Screw(4)	202574	Feed Bar Hinge Pin Collar with 200380(830)	268061	Feed Driving Connection 268060 with 268063
200078(806)	Feed Regulating Stud Socket Screw(2)	200394(803)	Feed Lifting Eccentric Set Screw(2)	208636	Feed Dog Shank Screw Washer	268062	Feed Driving Connection Hinge Stud with 268258
200100(803)	Feed Dog Screw(2)	200403(830)	Feed Bar Set Screw(2)	240245	Feed Regulating Stud Retaining Spring	268062	Feed Lifting Connection Hinge Stud with 268258
200123(804)	Feed Driving Connection Cap Screw	201256(830)	Feed Lifting Crank Pinch Screw	241763	Feed Driving Eccentric Friction Plate Screw Set Screw Packing (brass)(2)	268063	Feed Driving Connection Needle Bearing
200354(803)	Feed Driving Rock Frame Position Screw	201418(803)	Feed Lifting Rock Shaft Crank Position Screw	267623	Feed Driving Eccentric Friction Plate	268065	Feed Driving Eccentric Adjusting Disc
200362(803)	Feed Driving Rock Frame Set Screw	201522(805)	Feed Driving Connection Hinge Stud Nut	268034	Feed Bar with 200373(803) and two 200403(830)		
200373(803)	Feed Lifting Link Hinge Pin Set Screw (2)	201522(805)	Feed Lifting Connection Hinge Stud Nut	268035	Feed Bar Hinge Pin		
200380(830)	Feed Bar Hinge Pin Collar Set Screw						

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
268066	Feed Driving Eccentric Adjusting Disc Spring	268073	Feed Driving Rock Shaft Crank with two 200061(833)	268198	Feed Lifting Rock Shaft Crank with 201418(803) and two 200061(833)	269684	Feed Driving Rock Shaft
268067	Feed Driving Eccentric Adjusting Disc Spring Coiler with two 200382(833)	268074	Feed Lifting Connection	268258	Feed Driving Connection Hinge Stud Oil Packing (wick)	269685	Feed Lifting Rock Shaft
268069	Feed Driving Rock Frame with 200354(803) and 200362(803)	268075	Feed Lifting Crank with 200373(803) and 201256(830)	268258	Feed Lifting Connection Hinge Stud Oil Packing (wick)	269686	Feed Dog, 40 needle hole, with 267669 and two 200907(819) for 269689
268071	Feed Driving Rock Shaft Needle Bearing(2)	268077	Feed Lifting Eccentric Lubricating Pad (wood)	268258	Feed Lifting Link Hinge Pin Oil Packing (wick)(2)	270026	Feed Regulating Stud Spring
268071	Feed Lifting Rock Shaft Needle Bearing(2)	268078	Feed Lifting Link	268315	Feed Driving Flange with 267623, two each 241763, 350467(830), 350477(830) and 350548(803)	350467(830)	Feed Driving Flange Set Screw(2)
268072	Feed Driving Rock Shaft Collar with two 200386(830)(2)	268079	Feed Lifting Link Hinge Pin with 268258(2)	268316	Feed Dog Shank with 201537(819) and 350552(830)	350477(830)	Feed Driving Eccentric Friction Plate Screw Set Screw(2)
268072	Feed Lifting Rock Shaft Collar with two 200386(803)(2)	268081	Feed Regulating Stud			350548(803)	Feed Driving Eccentric Friction Plate Screw(2)
		268082	Feed Regulating Stud Socket			350552(830)	Feed Dog Shank Adjusting Screw

P300-2/206, 406 PULLER FEED PARTS

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
913(806)	Puller Feed Roll (upper) Bar Spring Adjusting Screw(2)	200572(803)	Puller Feed Roll (upper) Bar Position Bracket Adjusting Screw(2)	269622	Puller Feed Cross Shaft Bracket	269640	Puller Feed Roll (upper)(2)
200017(803)	Puller Feed Cross Shaft Bracket Screw(2)	201052(833)	Puller Feed Driving Shaft Thrust Collar Set Screw	269623	Puller Feed Cross Shaft Bracket 269622 with two 268425	269641	Puller Feed Roll (upper) Bar Bracket
200017(803)	Puller Feed Driving Shaft Bracket Screw(3)	201168(803)	Puller Feed Roll (lower) Shaft Sprocket Set Screw	269624	Puller Feed Cross Shaft Worm with 200382(833) and 201220(833)	269642	Puller Feed Roll (upper) Bar Lifter Arm (left)
200035(803)	Puller Feed Roll (lower) Chain Idler Sprocket Bracket Screw(2)	201220(833)	Puller Feed Cross Shaft Worm Position Screw	269625	Puller Feed Cross Shaft Worm Gear with two 200362(803)	269643	Puller Feed Roll (upper) Bar Lifter Arm (right)
200041(805)	Puller Feed Driving Shaft Cover Screw (lower)	201220(833)	Puller Feed Driving Shaft Worm Gear Position Screw	269626	Puller Feed Driving Shaft	269644	Puller Feed Roll (upper) Bar Lifter Arm Block
200084(850)	Puller Feed Roll (upper) Bar Lifter Arm Screw(2)	201220(833)	Puller Feed Roll (upper) Bracket Position Screw(2)	269628	Puller Feed Driving Shaft Cover	269645	Puller Feed Roll (upper) Bar Position Bracket with 200572(803) and 350328(803)(2)
200354(803)	Puller Feed Roll (lower) Position Screw	201308(805)	Puller Feed Roll (upper) Bar Bracket Screw (upper)	269629	Puller Feed Driving Shaft Sprocket with 200447(830)	269646	Puller Feed Roll (upper) Bar Spring(2)
200362(803)	Puller Feed Cross Shaft Worm Gear Set Screw(2)	232866	Puller Feed Cross Shaft Bracket Position Pin(2)	269630	Puller Feed Driving Shaft Thrust Collar with 201052(833)	269647	Puller Feed Roll (upper) Bracket with 200382(833) and 201220(833)(2)
200362(803)	Puller Feed Driving Shaft Worm Gear Set Screw	232866	Puller Feed Driving Shaft Bracket Position Pin(4)	269631	Puller Feed Driving Shaft Worm with two 200382(833) (for 9 stitches per inch)	269648	Puller Feed Roll (upper) Shaft(2)
200362(803)	Puller Feed Roll (lower) Set Screw	267110	Puller Feed Roll (upper) Needle Bearing(4)	269632	Puller Feed Driving Shaft Worm Gear with 200362(803) and 201220(833) (for 9 stitches per inch)	269649	Puller Feed Driving Shaft Bracket (right)
200378(803)	Puller Feed Driving Shaft Collar Set Screw(2)	268424	Puller Feed Driving Shaft Collar with two 200378(803)	269633	Puller Feed Roll (lower) with 200354(803) and 200362(803)	269650	Puller Feed Driving Shaft Bracket 269649 with 268425 (Needle Bearing on left)
200382(833)	Puller Feed Cross Shaft Worm Set Screw	268425	Puller Feed Cross Shaft Needle Bearing(2)	269634	Puller Feed Roll (lower) Chain	269670	Puller Feed Roll (upper) 269640 with two 267110(2)
200382(833)	Puller Feed Roll (upper) Bracket Set Screw(2)	268425	Puller Feed Driving Shaft Needle Bearing(2)	269635	Puller Feed Roll (lower) Chain Idler Sprocket	269671	Puller Feed Roll (upper) Shaft Retaining Ring(2)
200394(803)	Puller Feed Roll (lower) Shaft Collar Set Screw(4)	268428	Puller Feed Roll (upper) Bar(2)	269636	Puller Feed Roll (lower) Chain Idler Sprocket Bracket with 350558(819)	269672	Puller Feed Roll (lower) Shaft Needle Bearing(2)
200447(830)	Puller Feed Driving Shaft Sprocket Set Screw	268448	Puller Feed Driving Shaft Bracket	269637	Puller Feed Roll (lower) Chain Idler Sprocket Pin	350149(803)	Puller Feed Roll (upper) Bar Lifter Arm Block Screw(2)
200563(805)	Puller Feed Roll (upper) Bar Bracket Screw (lower)	269618	Puller Feed Roll (lower) Shaft Collar with two 200394(803)(2)	269638	Puller Feed Roll (lower) Shaft	350328(803)	Puller Feed Roll (upper) Bar Position Bracket Pinch Screw(2)
200571(804)	Puller Feed Driving Shaft Cover Screw (upper)(2)	269621	Puller Feed Cross Shaft	269639	Puller Feed Roll (lower) Shaft Sprocket with 201188(803)	350558(819)	Puller Feed Roll (lower) Chain Idler Sprocket Pin Set Screw
						350629(805)	Puller Feed Driving Shaft Bracket Screw (lower)

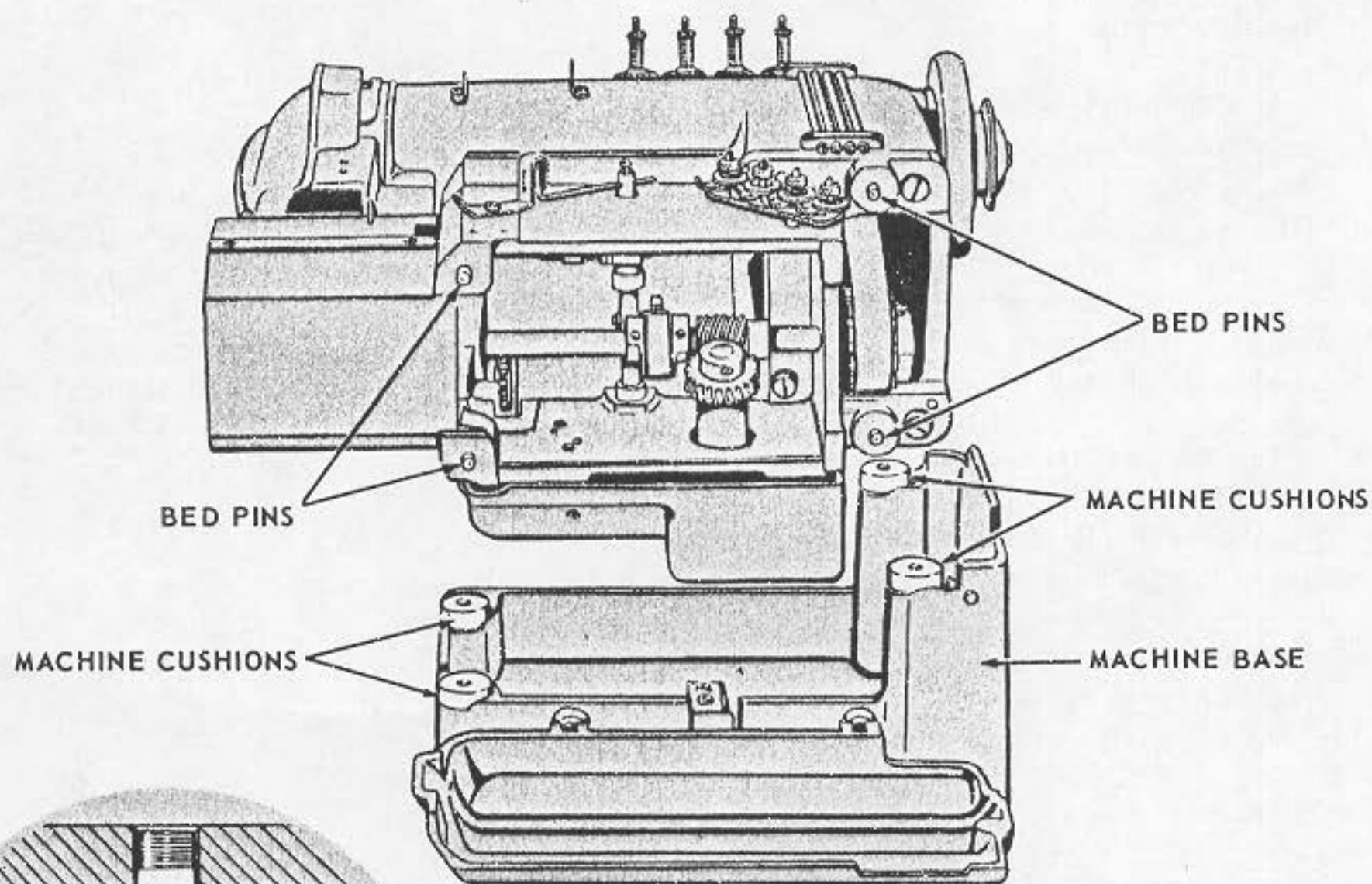
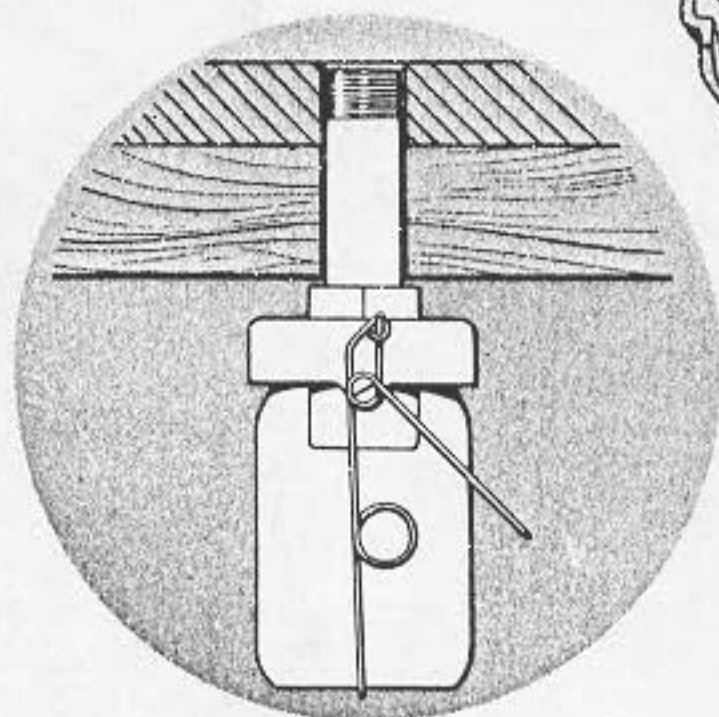


Fig. 2. Installation



OIL DRAIN JAR

INSTALLATION

Fasten machine base to table with hole for oil drain jar aligned with hole in table. Attach oil drain jar.

Set machine onto machine base by inserting bed pins into machine cushions as shown in Fig. 2.

Connect foot lifter lever to foot lifter treadle with chain furnished for this purpose.

LUBRICATION

These machines have an automatic oiling system consisting of a hollow arm shaft and hollow bed shaft which act as reservoirs. Oil is delivered by centrifugal force, through small jets in the shafts, to all principle bearings when the machine is operating.

Oil holes are provided for lubricating movable parts in contact which are not lubricated from the reservoirs.

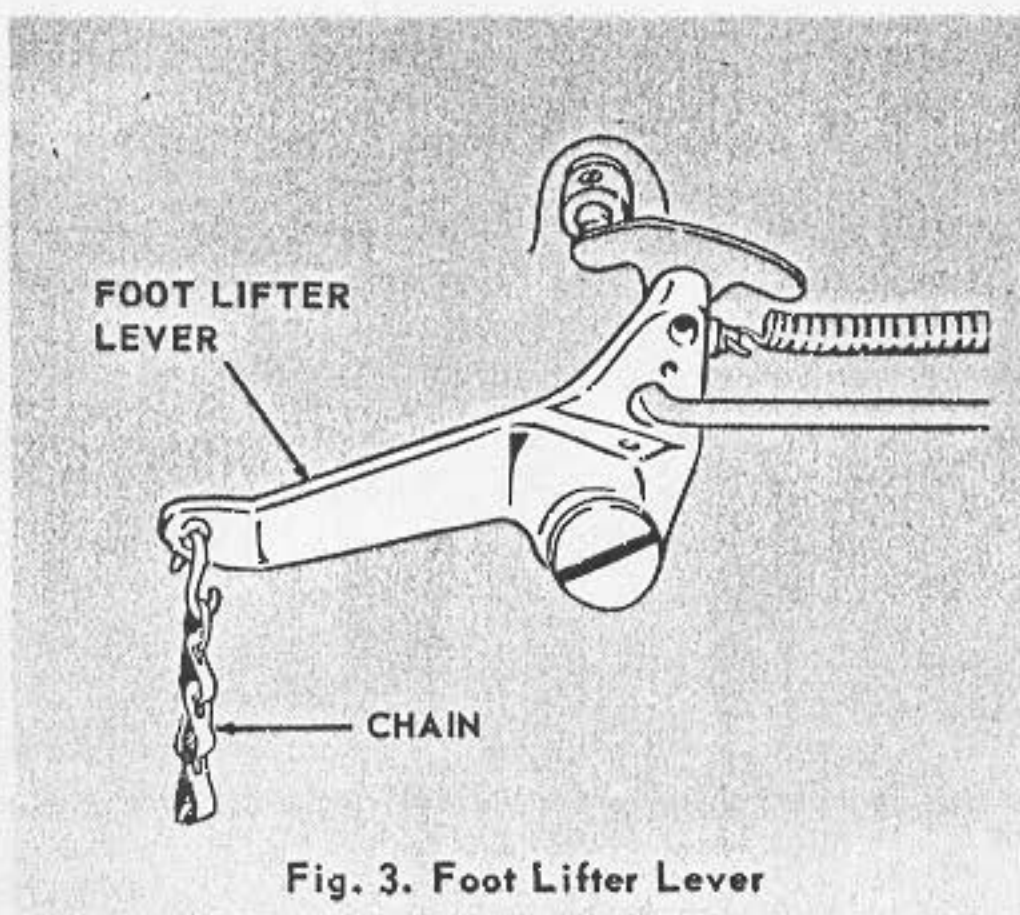


Fig. 3. Foot Lifter Lever

LIST OF PARTS FOR P300-2/201 MACHINE
SAME AS BASIC MACHINE P300-2 WITH THE FOLLOWING
EXCEPTIONS

267821	Feed Dog with two 268318 and four 200172(804) 15TPI #46 N.H. for 7/8" gauge (code 056). When ordering state gauge.
267825	Feed Dog with two 268318 and four 200172(804) 15TPI #46 N.H. for 1" gauge.(code 100) and 1-1/4" gauge (code 116). When ordering state gauge.
267829	Feed Dog with two 268318 and four 200172(804) 15TPI #46D N.H. for 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.
268105	Looper Holder with four 350478(803) for 7/8" gauge (code 056). When ordering state gauge.
268106	Looper Holder with four 350478(803) for 1" gauge (code 100). When ordering state gauge.
268107	Looper Holder with four 350478(803) for 1-1/4" gauge (code 116) 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.
268136	Needle Bar.
268255	Needle Bar Rock Frame Thread Guide for 7/8" gauge.(code 056). When ordering state gauge.
268256	Needle Bar Rock Frame Thread Guide for 1" gauge (code 100). When ordering state gauge.
268268	Needle Bar Rock Frame Thread Guide for 1-1/4" gauge (code 116) 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.
268154	Needle Holder with two 50014(830) for 7/8" gauge (code 056). When ordering state gauge.
268156	Needle Holder with two 50014(830) for 1" gauge (code 100). When ordering state gauge.
269574	Pressor Foot (hinged, compensating) #46D N.H. for 7/8" gauge (code 056) and 1" gauge (code 100). When ordering state gauge.
269577	Pressor Foot (hinged, compensating) #46D N.H. for 1-1/4" gauge (code 116) 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.
268376	Spreader with two 268162 for 7/8" gauge (code 056). When ordering state gauge.
268378	Spreader with two 268162 for 1-1/4" gauge (code 116) 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.
267858	Throat Plate for 7/8" gauge.(code 056). When ordering state gauge.

NOTE: When ordering replacement parts from this catalog, a "P" prefix must be added to all part numbers required.

- 267859 Throat Plate for 1" gauge (code 100) and 1-1/4" gauge (code 116). When ordering state gauge.
- 267860 Throat Plate for 1-3/8" gauge (code 124) and 1-1/2" gauge (code 132). When ordering state gauge.

TWO EACH OF THE FOLLOWING PARTS ARE USED

- 268382 Looper and Needle Guard complete nos. 268310 and 268380.
- 268333 Looper Thread Tension Thread Guide.
- 268332 Looper Thread Tension complete, nos. 10148, 141432(819), 201572(819) and two 244048.
- 268132 Looper Thread Tube.
- 226206 Needle Thread Tension Releasing Pin.
- 54279 Needle Thread Tension Thread Guide (double).
- 268263 Needle Thread Tension complete nos. 32572, 59537, 59538, 59539, 131741 and two 2102.

THE FOLLOWING PARTS ARE NOT USED

- 269564 Edge Guide.
- 200161(850) Edge Guide Screw (2)

NOTE: The standard gauges are 1-1/4 - 1-3/8 and 1-1/2. The 7/8 and 1 are furnished on special order.

Complete Lubrication of Machine is Necessary Before Operation

Use Union Special Oil, Specification 175, a water white straight mineral oil of a saybolt viscosity of 90 to 125 seconds at 100 degrees fahrenheit.

Arm shaft reservoir is filled through oil hole at end of machine pulley or at end of needle bar crank as shown in Fig. 4.

Needle bar connecting link needle bearings, connecting stud and needle bar bearings are readily accessible for lubrication under face plate as shown in Fig. 4.

Needle bar rock frame needle bearings are lubricated through oil hole indicated in Fig. 5.

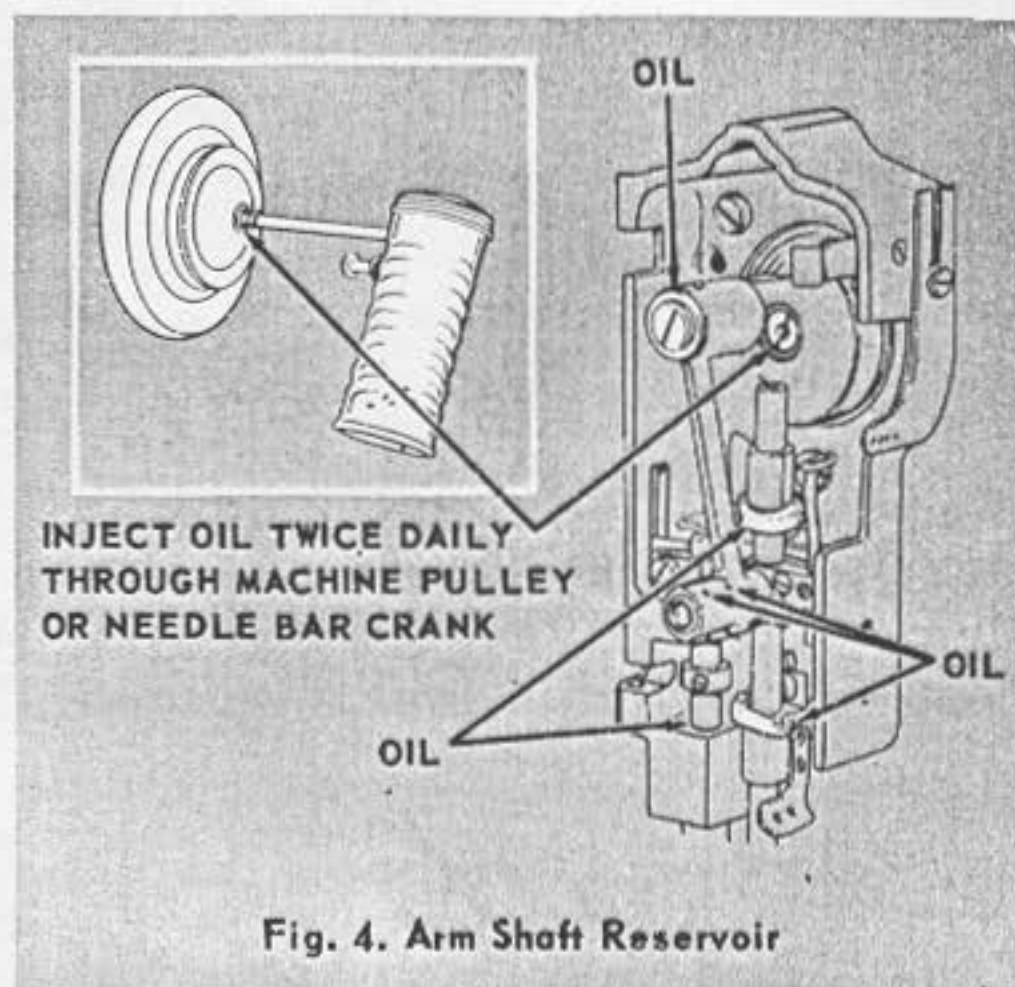
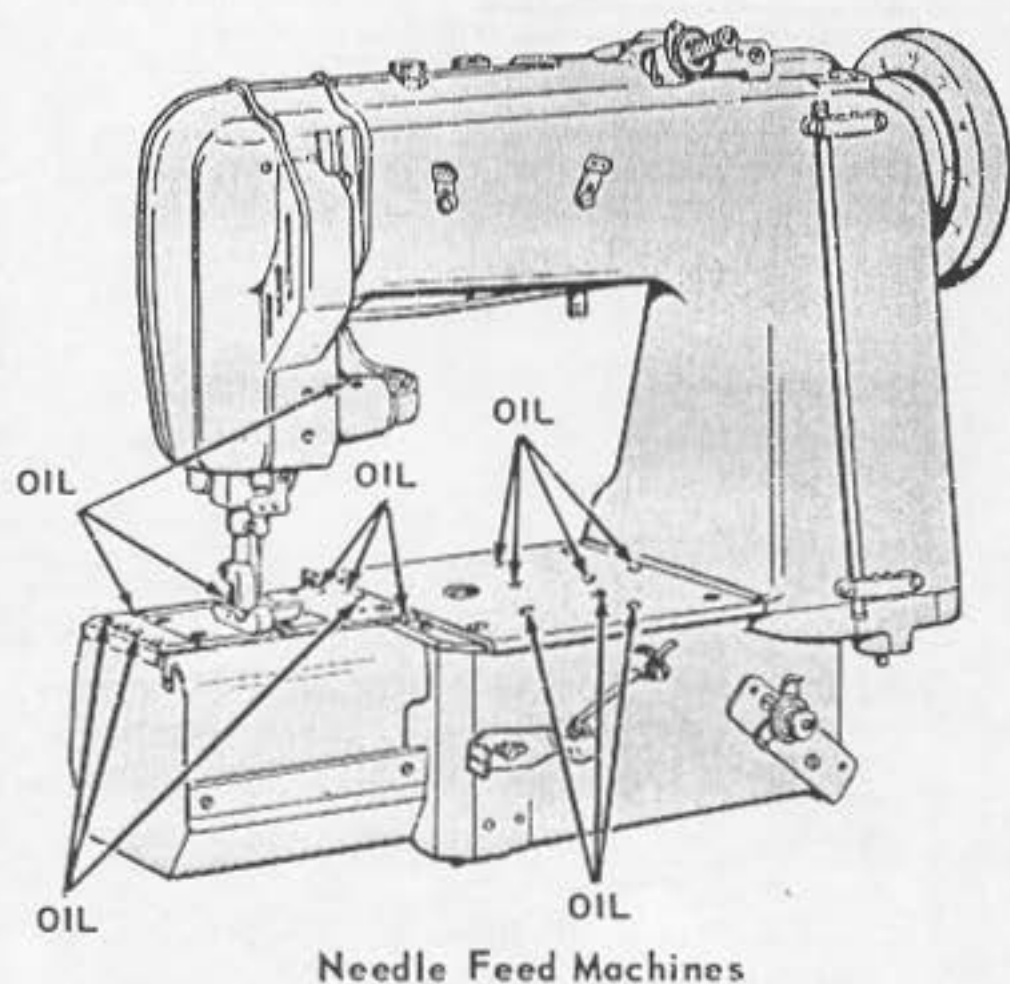
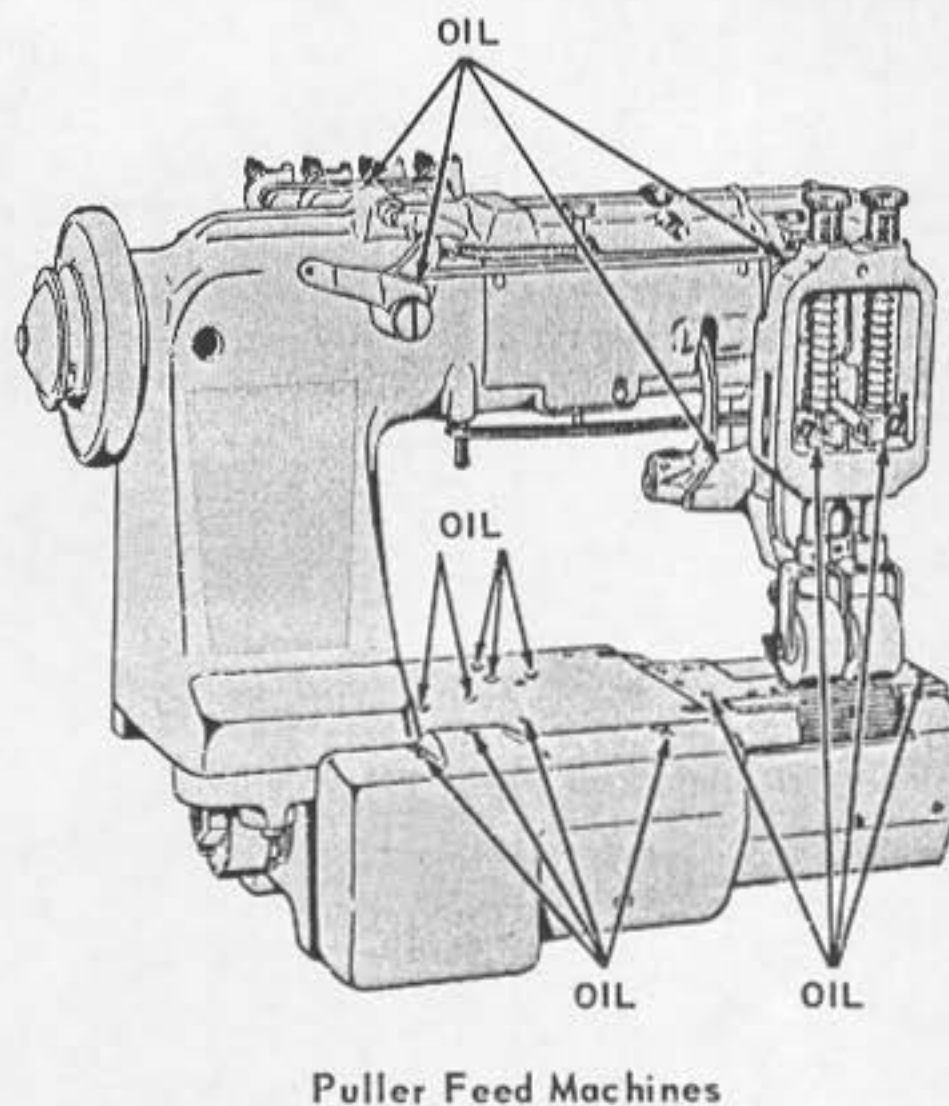


Fig. 4. Arm Shaft Reservoir



Needle Feed Machines



Puller Feed Machines

Fig. 5. Lubricating the Machine

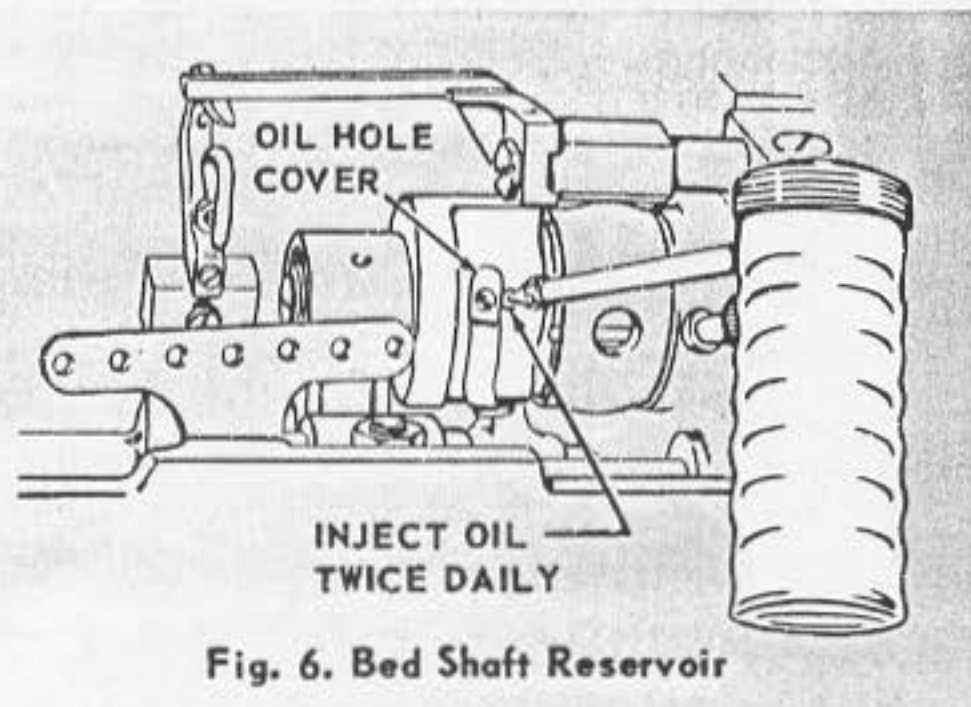


Fig. 6. Bed Shaft Reservoir

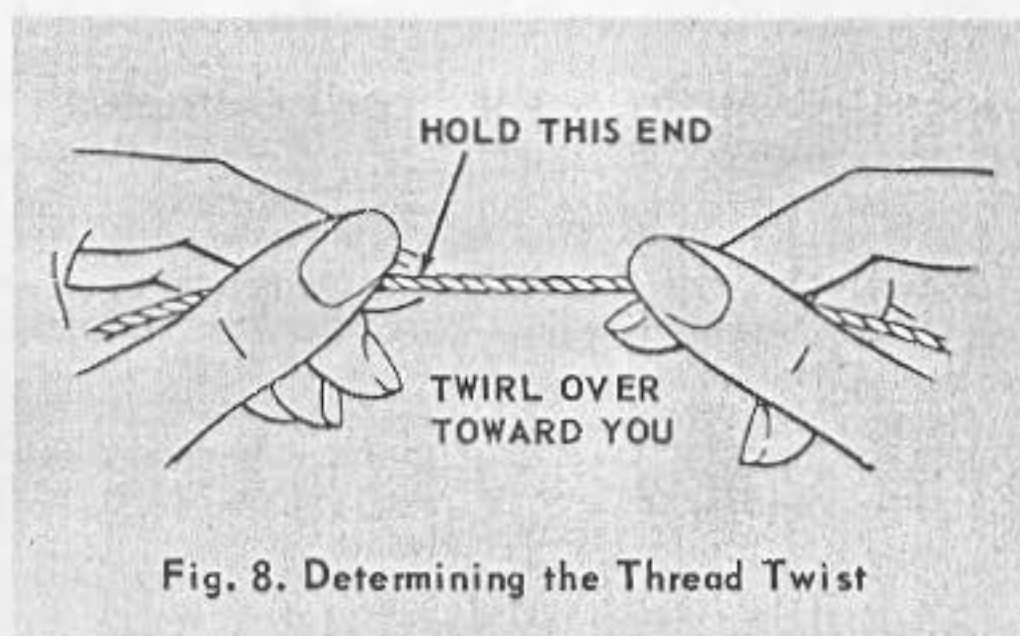
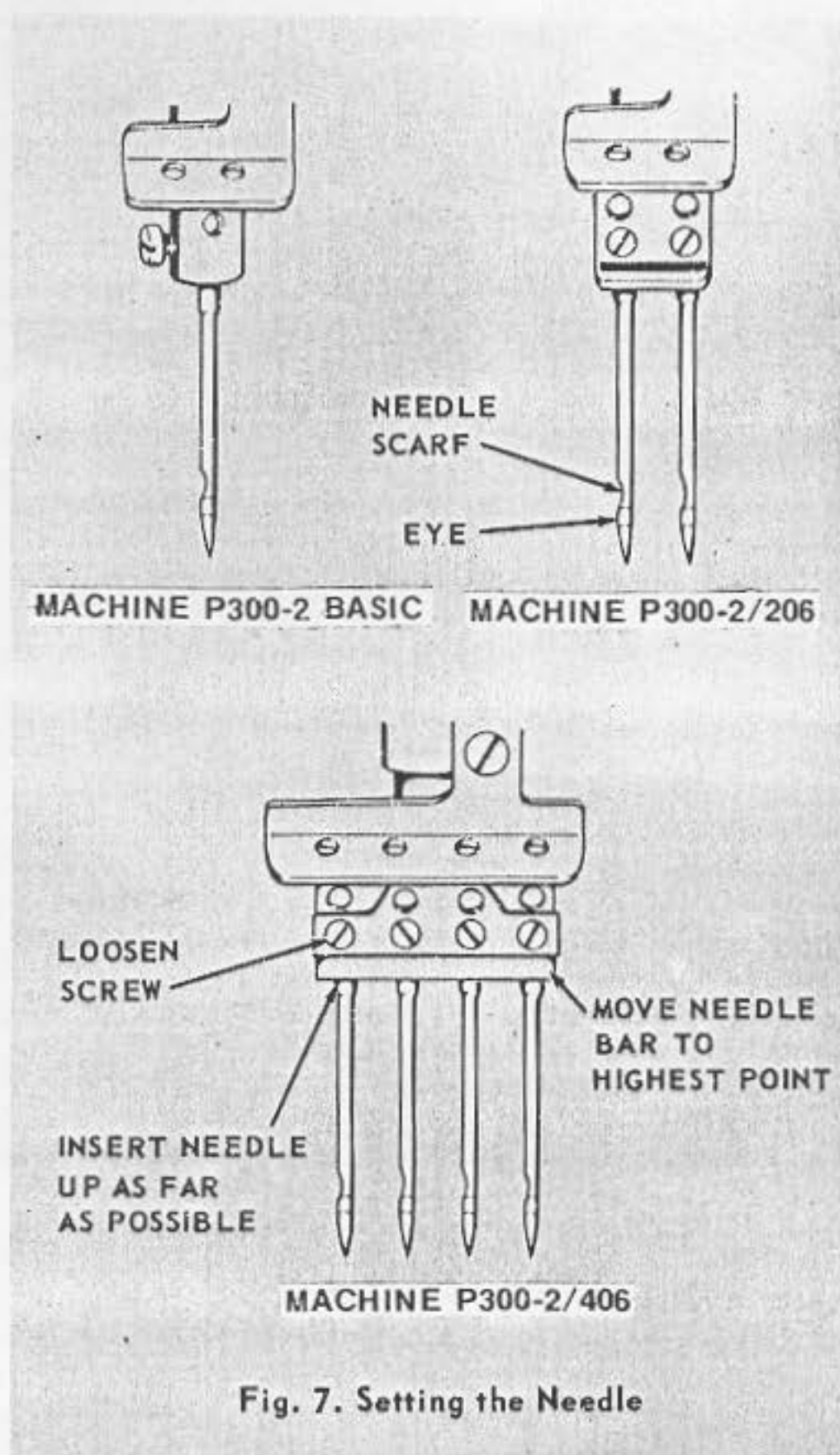
Bed shaft reservoir is filled through hole under looper driving crank oil hole cover, Fig. 6, or through oil hole at end of bed shaft connection belt pulley.

Moving parts under bed may be lubricated through holes in bed surface or by removing bed plates. Other moving parts in contact under bed and at rear of machine are provided with oil holes for efficient lubrication.

A machine in continuous use should be lubricated twice daily.

CLEANING

Using short bristled brush (not point of scissors or shears), remove lint or other waste from around the loopers, from between the feed rows and underside of the throat plate and from other operating parts. Wipe the exterior of machine with a soft cloth.



SPEED

Maximum speed for these machines is 4500 stitches per minute. Operating speed depends on material sewn and operation performed.

New machines should run at a speed of 500 stitches per minute less than maximum speed for the first 100 hours of operation.

NEEDLES

Use Union Special Needles, Catalog P3260, in sizes ranging from 14 to 25.

Size of needle for an operation is determined by size of thread used and type of material sewn.

Orders for needles should specify quantity required, catalog number and size number.

For Example:

100 Needles, Catalog P-3260, Size 22

SETTING THE NEEDLE

Turn machine pulley over toward operator until needle bar is at its highest position. Loosen needle set screw. Insert needle up into needle holder as high as it will go with needle scarf to left and eye of needle in line with horizontal machine arm, as shown in Fig. 7.

THREAD

Left twist thread should be used in the needles.

Either left or right twist thread may be used in the loopers.

Thread twist is determined by holding thread as indicated in Fig. 8. Twirl thread over toward you with thumb and forefinger of right hand. If left twist thread, strands will wind tighter. If right twist thread, strands will unwind or separate.

THREADING THE MACHINE

Upper Threading

Turn machine pulley over toward operator until needle bar is at its highest position.

Pass thread through threading points indicated in Fig. 9.

Draw about two inches of thread through needle eye to start sewing.

The P300-2/201, P300-2/206 and P300-2/406 are all threaded as indicated in Fig. 9.

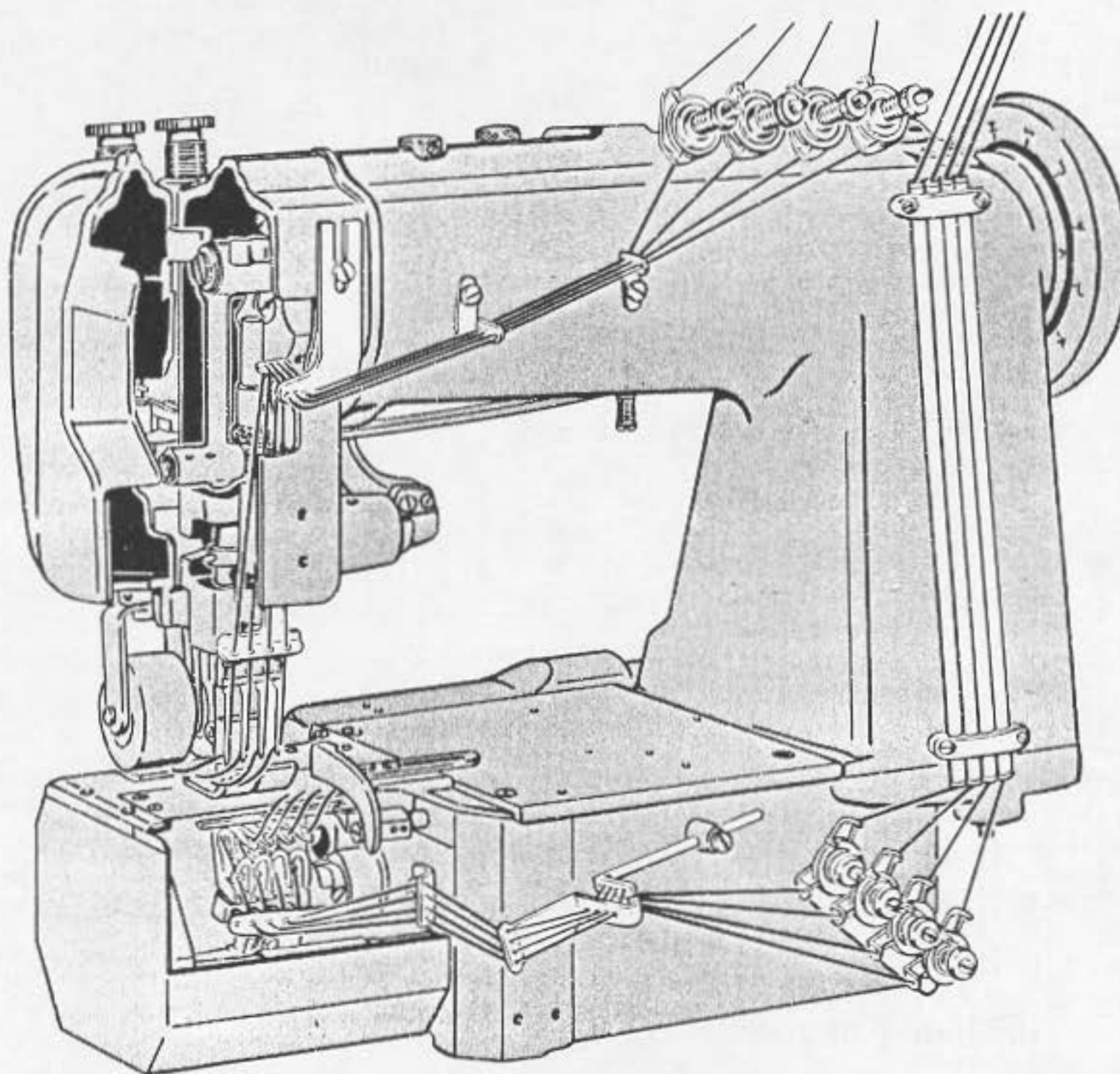
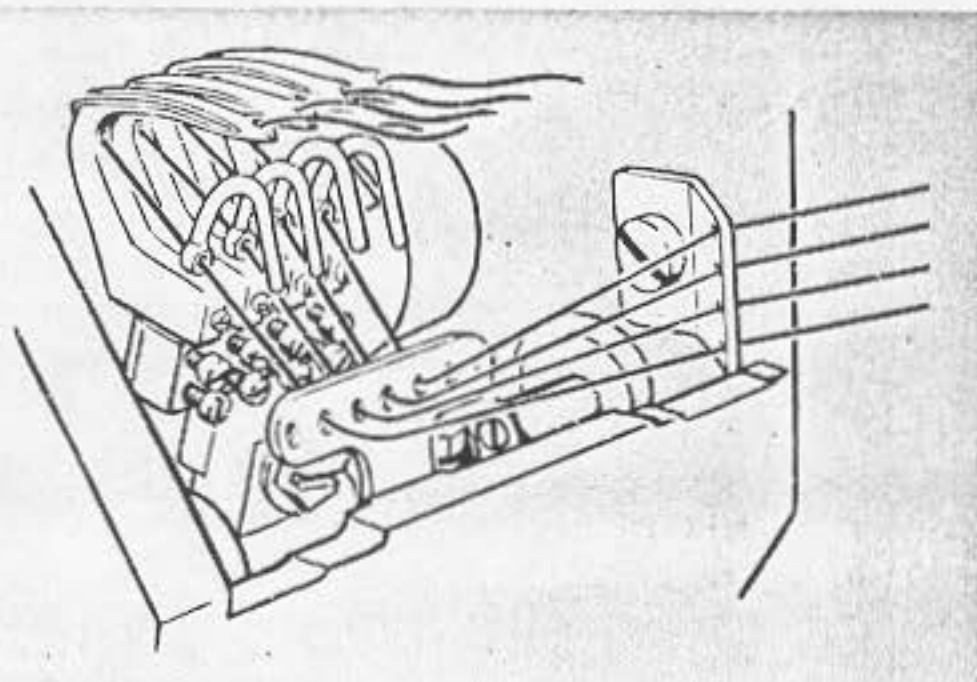


Fig. 9. Threading the Machine



Lower Threading

Turn machine pulley over toward operator until needle bar is at its highest position. Pass thread through threading points indicated in Fig. 9. When threading looper, insert wire threader into front of looper eye shown at left. With threading tweezers, drop thread into wire threader opening and draw wire threader toward you from back to front through the looper eye. Draw about two inches of thread through looper to start sewing.

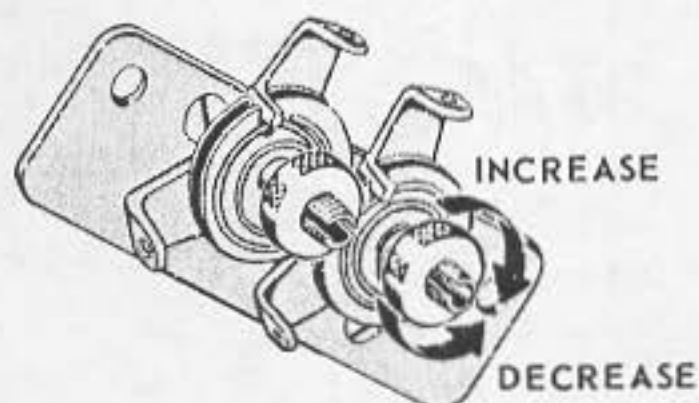
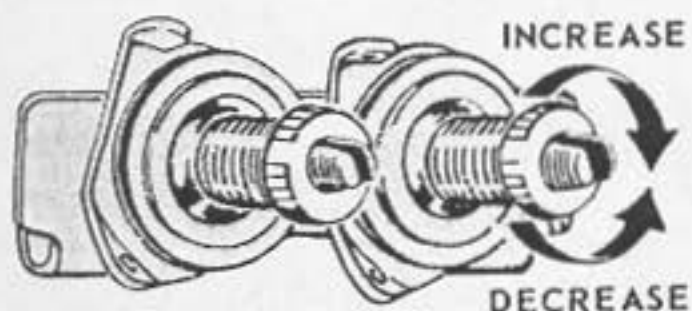


Fig. 10. Needle and Looper Thread Tensions

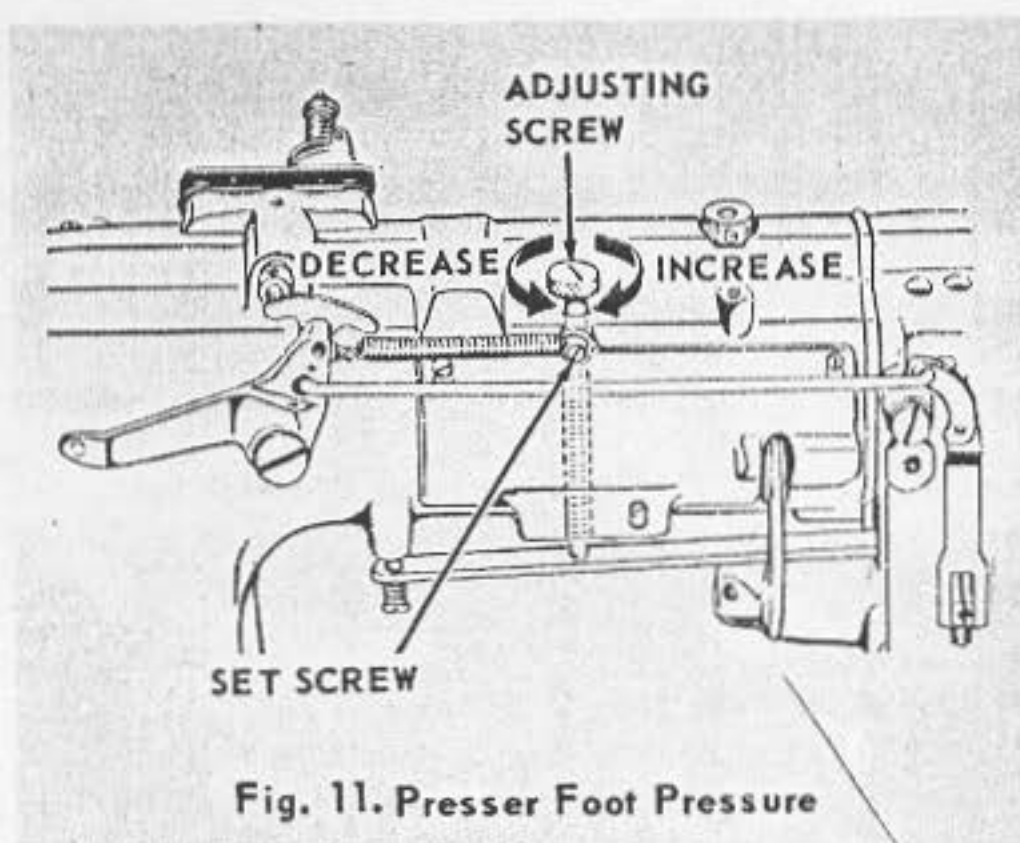


Fig. 11. Presser Foot Pressure

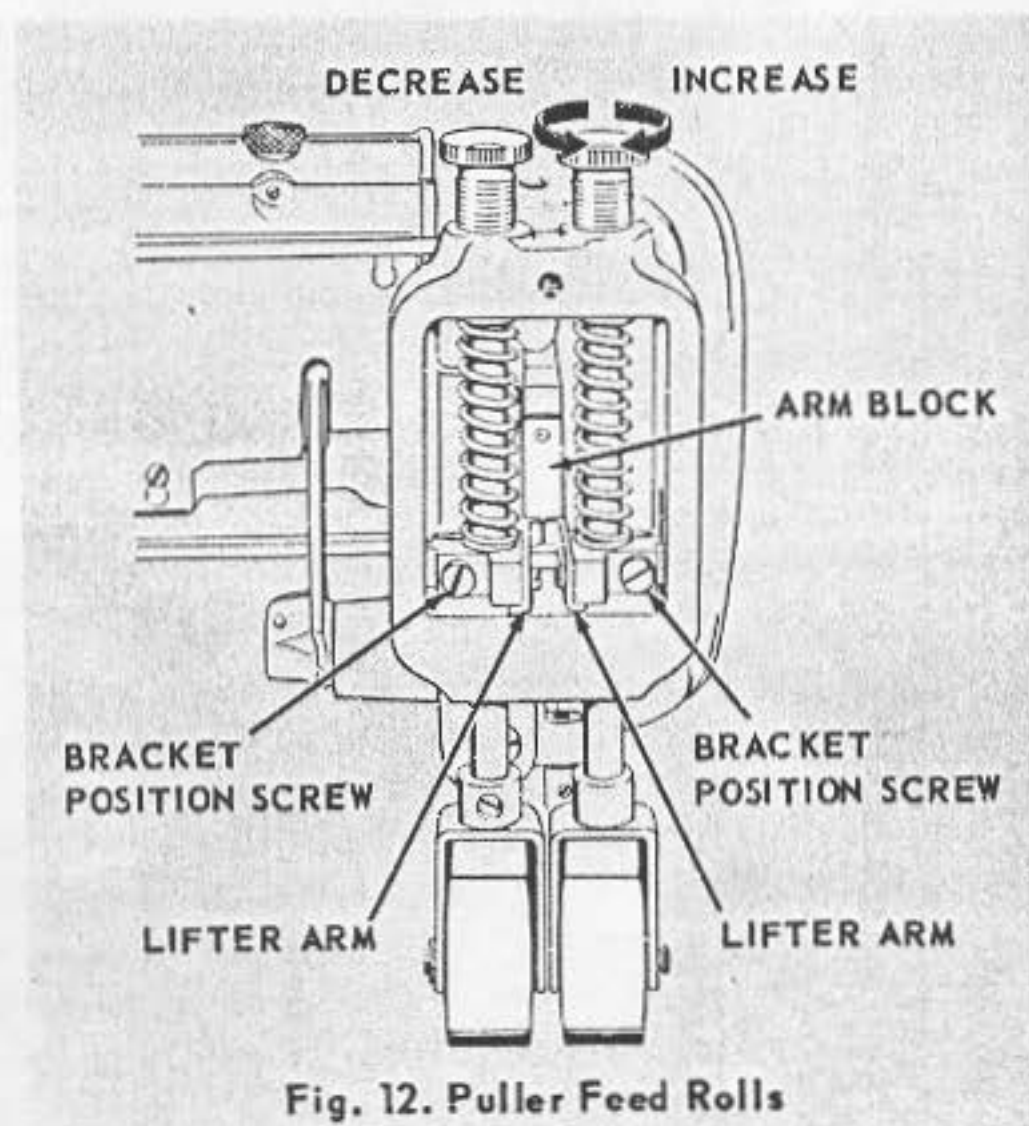


Fig. 12. Puller Feed Rolls

THREAD TENSIONS

Tension on thread should be as light as possible while sufficient to set stitches correctly in material.

Regulate Needle Thread Tensions Only When Presser Foot is Down

Needle thread tension and looper thread tension are regulated by thumb nuts shown in Fig. 10. To increase tension, turn thumb nuts over to right. To decrease tension, turn thumb nuts over to left.

PRESSURE ON MATERIALS

Pressure on material should be as light as possible while still sufficient to insure correct feeding.

Presser Foot

To regulate presser foot pressure, loosen set screw shown in Fig. 11. To increase pressure, turn adjusting screw in. To decrease pressure, turn adjusting screw out. Re-tighten set screw.

Puller Feed Roll

To increase puller feed roll pressure, turn adjusting screw (shown in Fig. 12) down. To decrease, turn up.

Puller Feed Roll Bar Position Brackets

Puller feed roll bar position brackets are correctly positioned when lifter arms are resting on arm block as shown in Fig. 12. If adjustment is required, loosen bracket position screw shown in Fig. 12 and lower bracket to correct position. Re-tighten bracket position screw.

STITCH LENGTH REGULATION

P300-0/201 - Needle Feed

To regulate stitch length, depress plunger on machine arm shown in Fig. 13 and turn machine pulley until plunger drops into recess in eccentric adjusting disc on arm shaft. **NEVER DEPRESS PLUNGER WHEN MACHINE IS OPERATING.** Turn plunger to lock in "Down" position. With machine pulley in this position, the button on bed surface should drop into recess in eccentric adjusting disc on bed shaft. When both plunger and button are in "Down" position, turn machine pulley until desired stitch length is opposite indicating arrow on machine arm. Release plunger and button. **NEVER START MACHINE UNTIL PLUNGER AND BUTTON ARE RELEASED.**

The letter "A" opposite the indicating arrow represents the longest stitch length and the letter "L" represents the shortest stitch length.

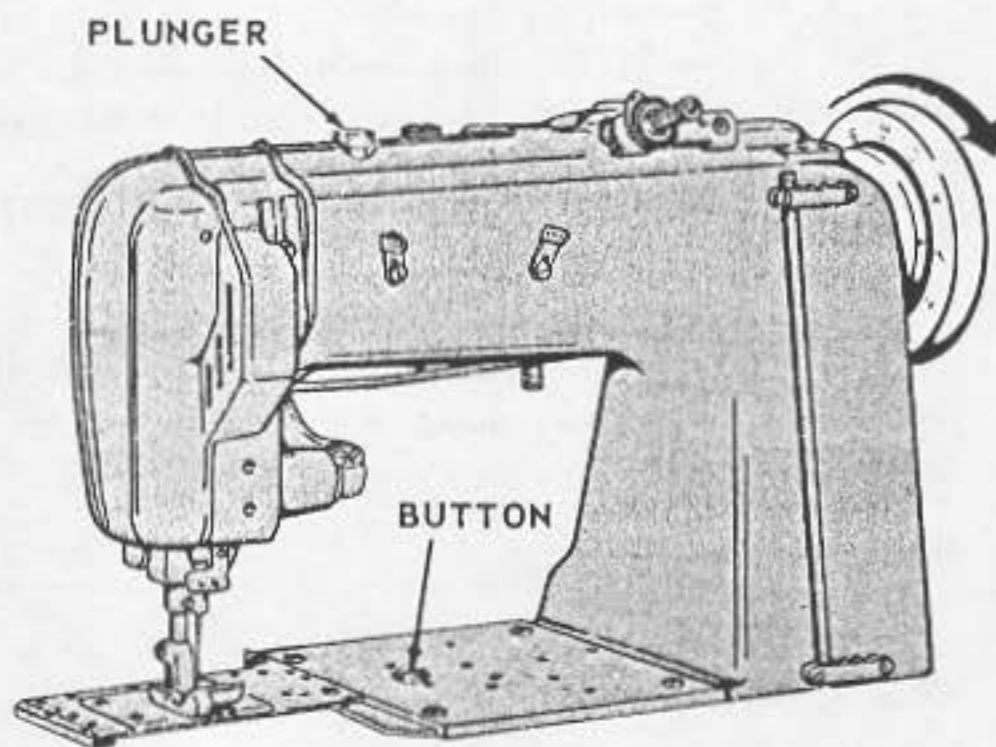


Fig. 13. Stitch Length Regulation

P300-2/206 and P300-2/406 – Puller Feed

Puller feed stitch length is regulated by changing the worm and worm gear shown in Fig. 14. These puller feed machines are regularly furnished with a worm and worm gear for 9 stitches per inch but can be fitted for stitch lengths ranging from 4 to 12 per inch. To change puller feed stitch length worm and worm gear, first remove cover from rear of machine. Loosen collar set screws, worm gear set screws, worm set screws and sprocket set screws. Slide driving shaft to right far enough to allow for removal of worm and worm gear. Place new worm on cross shaft and turn worm in operating direction so that first set screw is tightened into flat of cross shaft. Tighten the other worm set screw, also. Place worm gear on driving shaft in a position engaged with worm and set shaft in brackets so that end of shaft is flush with end of sprocket as shown in Fig. 14. Tighten worm gear set screws and sprocket set screws. Set collars against brackets to remove end play as shown in Fig. 14 and tighten collar set screws.

Synchronizing Needle Feed with Puller Feed

Depress plunger on machine arm shown in Fig. 15 and turn machine pulley until plunger drops into recess in eccentric adjusting disc. **NEVER DEPRESS PLUNGER WHEN MACHINE IS OPERATING.** Then turn machine pulley toward operator to increase stitch length, or away from operator to decrease stitch length. Release plunger. **NEVER START MACHINE UNTIL PLUNGER IS RELEASED.** Repeat this procedure to gradually increase or decrease the needle feed stitch length until it matches puller feed stitch length.

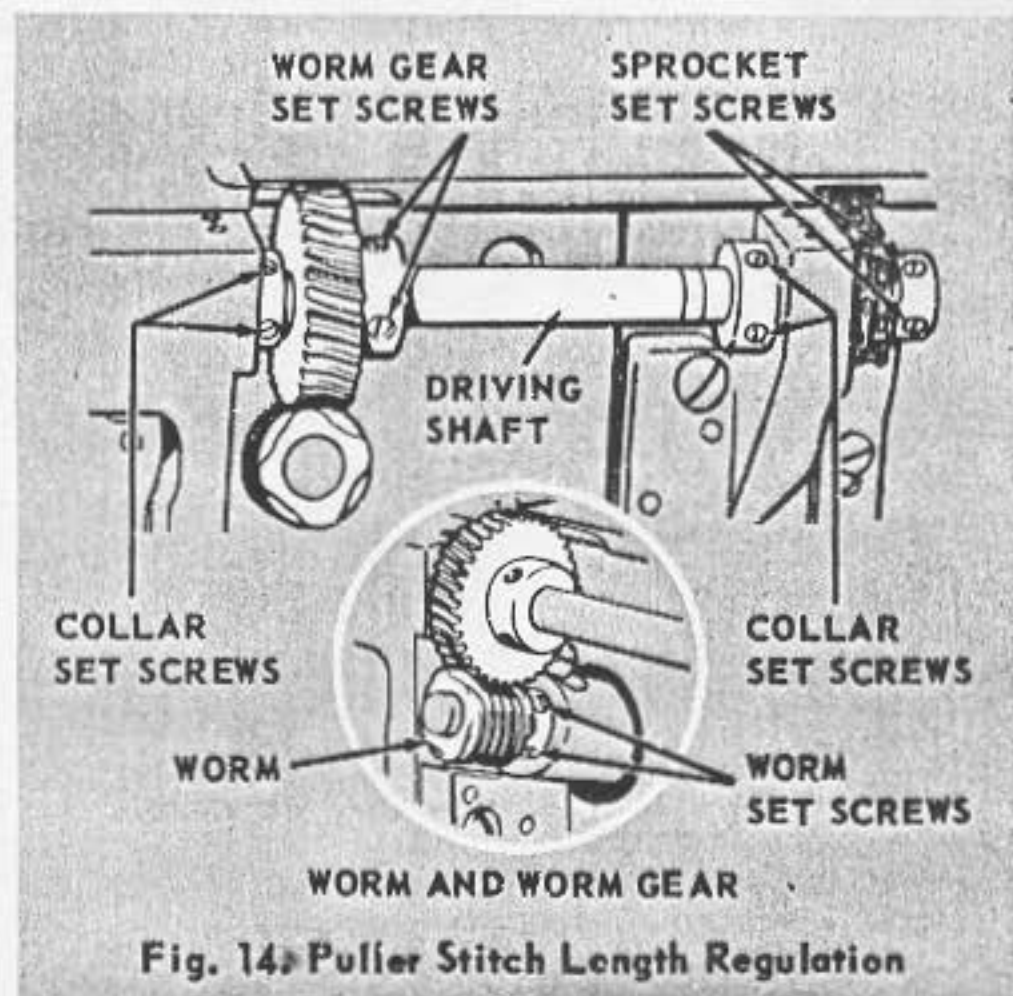


Fig. 14. Puller Stitch Length Regulation

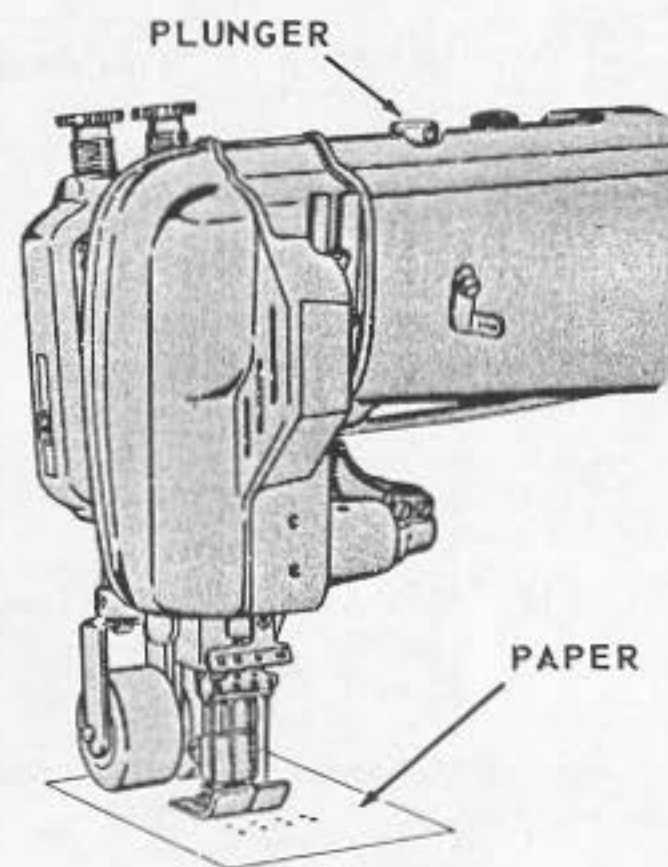


Fig. 15. Synchronizing Needle Feed with Puller Feed

One method of determining whether needle feed is synchronized with puller feed is by using an ordinary sheet of paper. Raise puller feed rolls and presser foot and place paper in sewing position. Lower puller feed rolls and presser foot onto paper. Rotate machine pulley by hand through a few stitching cycles. If needle feed is synchronized with puller feed, the holes in the paper produced by the needles will be the same size as the needles. If the needle feed is not synchronized with the puller feed, the needles will tear the paper, producing oblong shaped holes. Continue adjusting needle feed in this way until the needles produce circular holes of their own size in the paper.

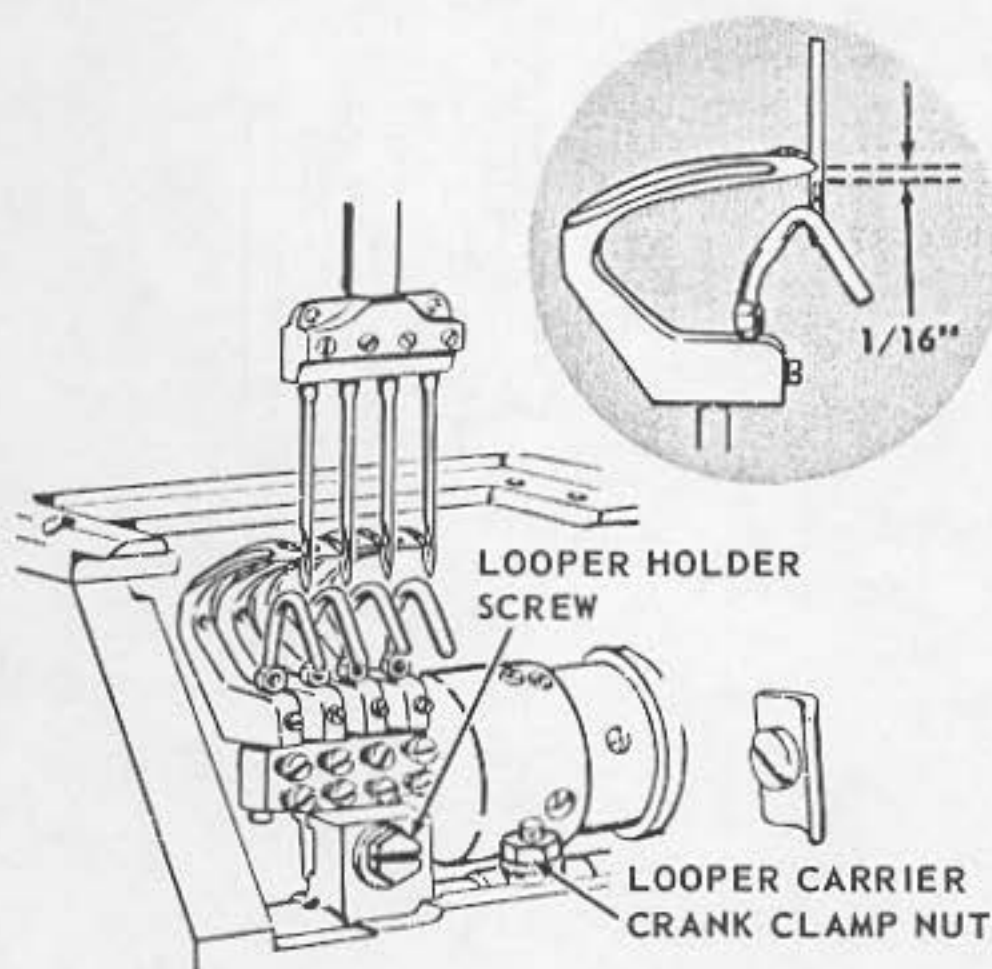


Fig. 16. Looper Position and Timing

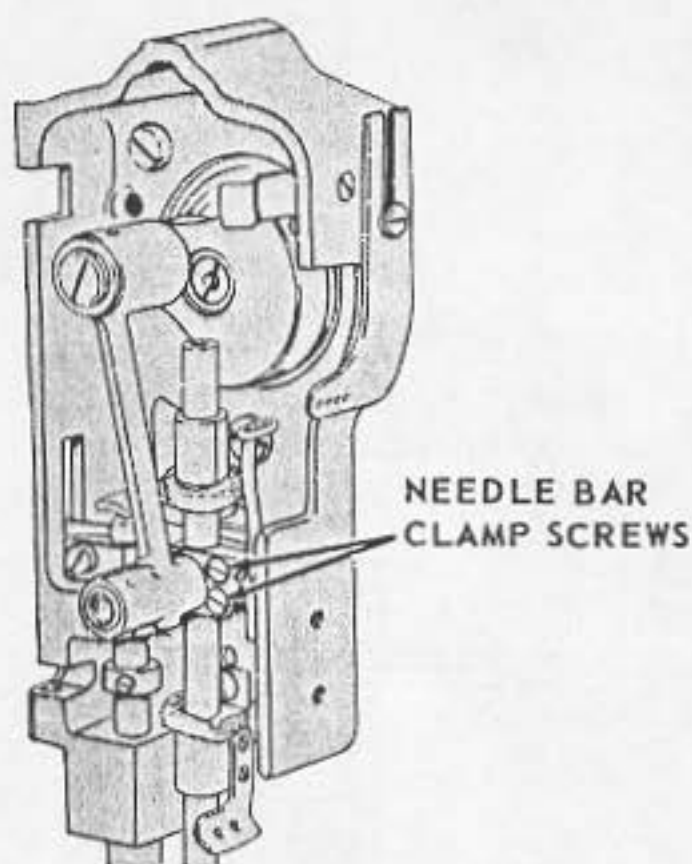


Fig. 17. Setting Needle Bar

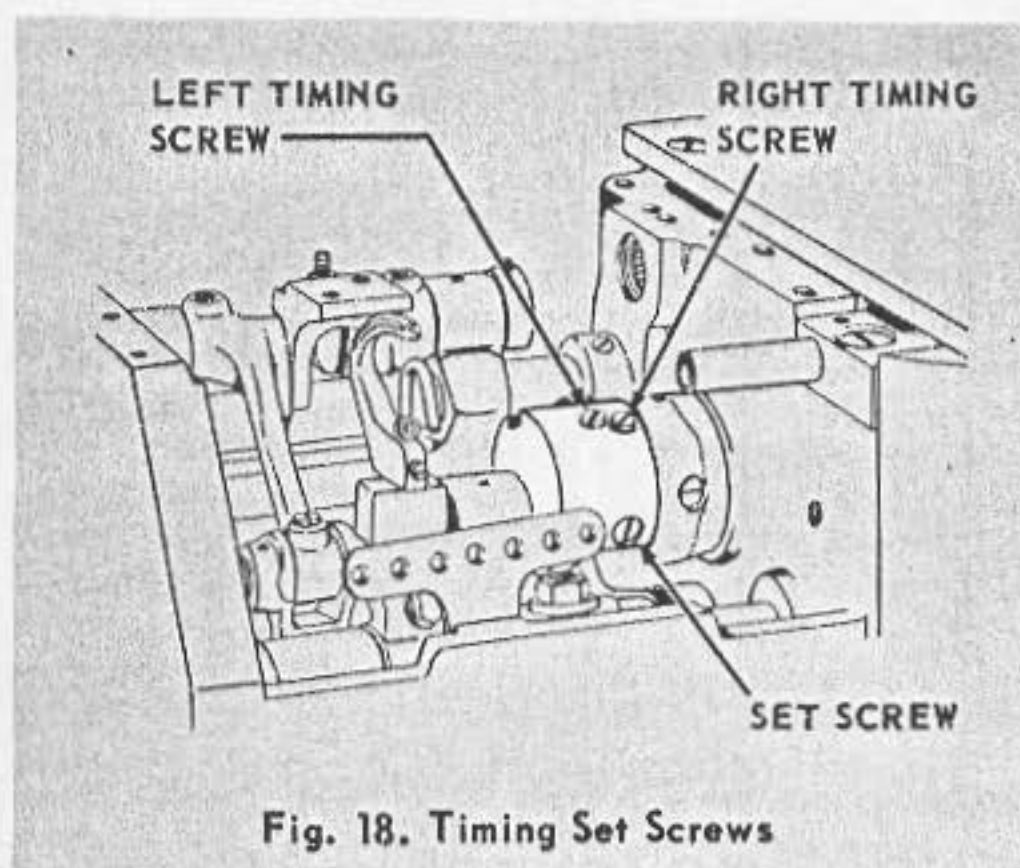


Fig. 18. Timing Set Screws

LOOPER POSITION

The loopers should be inserted into the looper holder, down to their lowest position. The looper points should pass the needle scarfs as close as possible (without hitting the needles) approximately $1/16$ inch above the upper edge of the needle eye as shown in Fig. 16. If adjustment is required, loosen looper holder screw shown in Fig. 16 and tap looper holder toward or away from needle as required.

LOOPER TIMING AND NEEDLE BAR SETTING

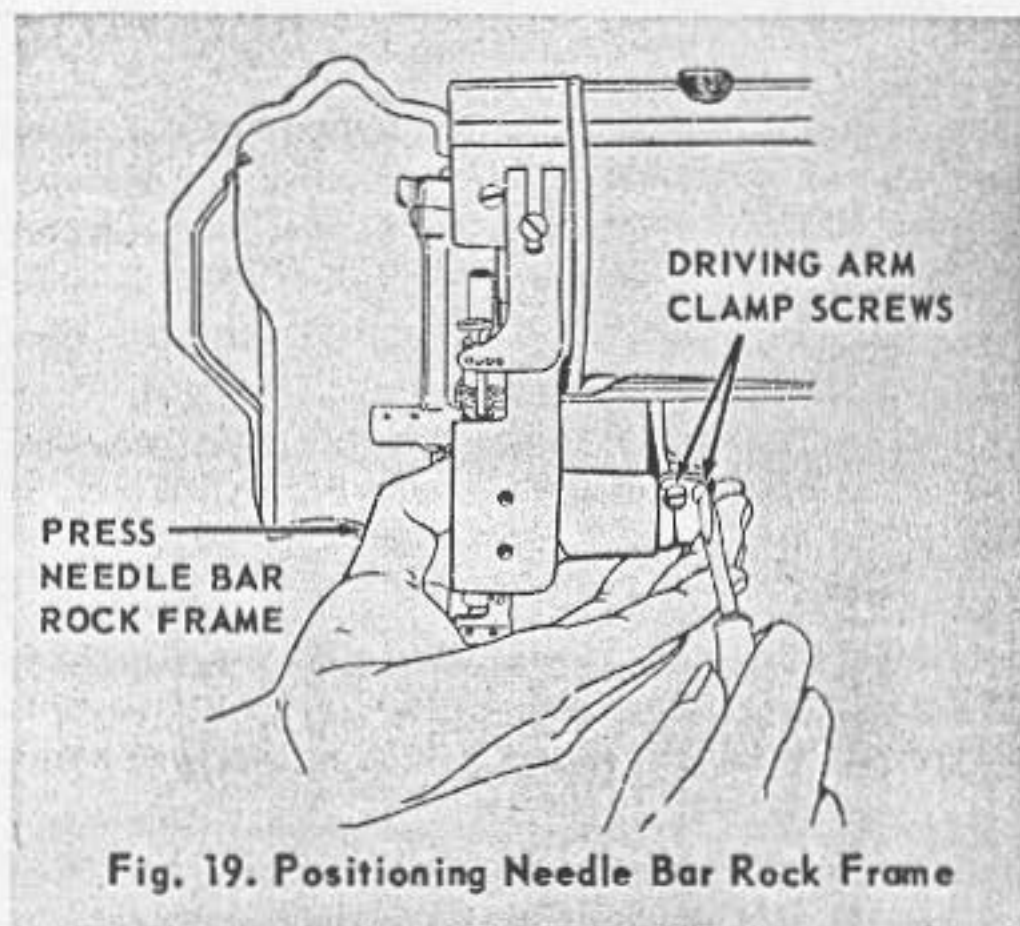
When looper timing mark "LT" on machine pulley is opposite indicating arrow on machine arm, the looper point should be at the center of the needle blade. If adjustment is required, loosen looper carrier crank clamping nut shown in Fig. 16 and move looper carrier forward or backward to correct position.

With looper point at the center of needle blade, the needle bar height is correct when the upper edge of the needle eye is about $1/16$ inch below the looper point. If adjustment is required, loosen needle bar clamping screws shown in Fig. 17 and raise or lower needle bar to correct position.

Turn machine pulley over until letter "G" is opposite indicating arrow on machine arm. At this position the looper point should again be at the center of the needle blade about $1/16$ inch above the upper edge of the needle eye. When adjustment is required, loosen set screw indicated in Fig. 18. Then, loosening the right timing screw shown in Fig. 18 and tightening the left timing screw moves the looper point forward in its cycle with respect to the needle. Loosening the left timing screw and tightening the right timing screw moves the looper point backward in its cycle with respect to the needle. Adjust timing screws and looper carrier until the looper driving crank positions the looper point about $1/16$ inch above the upper edge of the needle eye on its forward and reverse stroke.

NEEDLE BAR POSITIONING

Needles should enter the needle holes of the feed dog or throat plate toward the front and centered with respect to the sides. To adjust, press needle bar rock frame, Fig. 19, against drive arm, and at the same time loosen the two driving arm clamp screws. Continue holding the rock frame against the drive arm, move needle bar to correct position and tighten two clamp screws.



PRESSER BAR LIFT

When the presser foot is raised by the presser bar lifter and the needle is at its highest position, the point of the needle should not protrude below the presser foot.

To adjust, turn machine pulley over toward operator until needle is at its highest position. Loosen collar set screw, Fig. 20. Raise presser foot to the correct height, place stop collar against upper bracket, and tighten the set screw.

POSITION OF SPREADER POINTS

Spreader Points in Relation to Loopers

The correct height of the spreader points as the loopers pass on their forward stroke is opposite the upper edge of the thread groove at the left side of the loopers as indicated in Fig. 21.

The clearance between the spreader points and the loopers should be approximately a double thickness of ordinary paper.

If adjustment is required, loosen spreader holder set screws, shown in Fig. 21 and set spreader points at correct position.

Spreader Points in Relation to Needles

Turn machine pulley over until, on the downward stroke of the needle, the needle point and the spreader point are on the same level. The distance as illustrated in Fig. 22 between the spreader point and the looper point should then be approximately 1/16 inch. If adjustment is required, loosen spreader screw shown in Fig. 21 and move spreader points backward or forward as required. Re-tighten spreader screw.

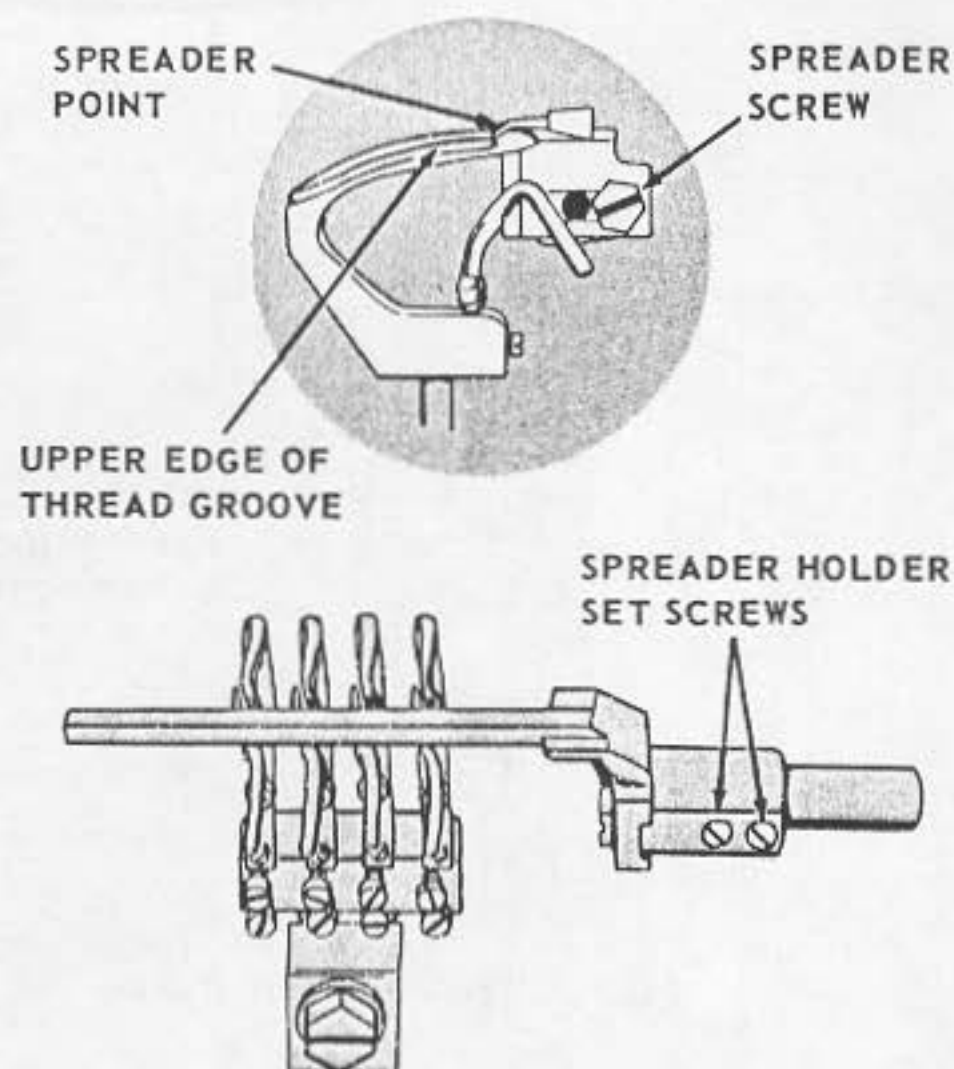
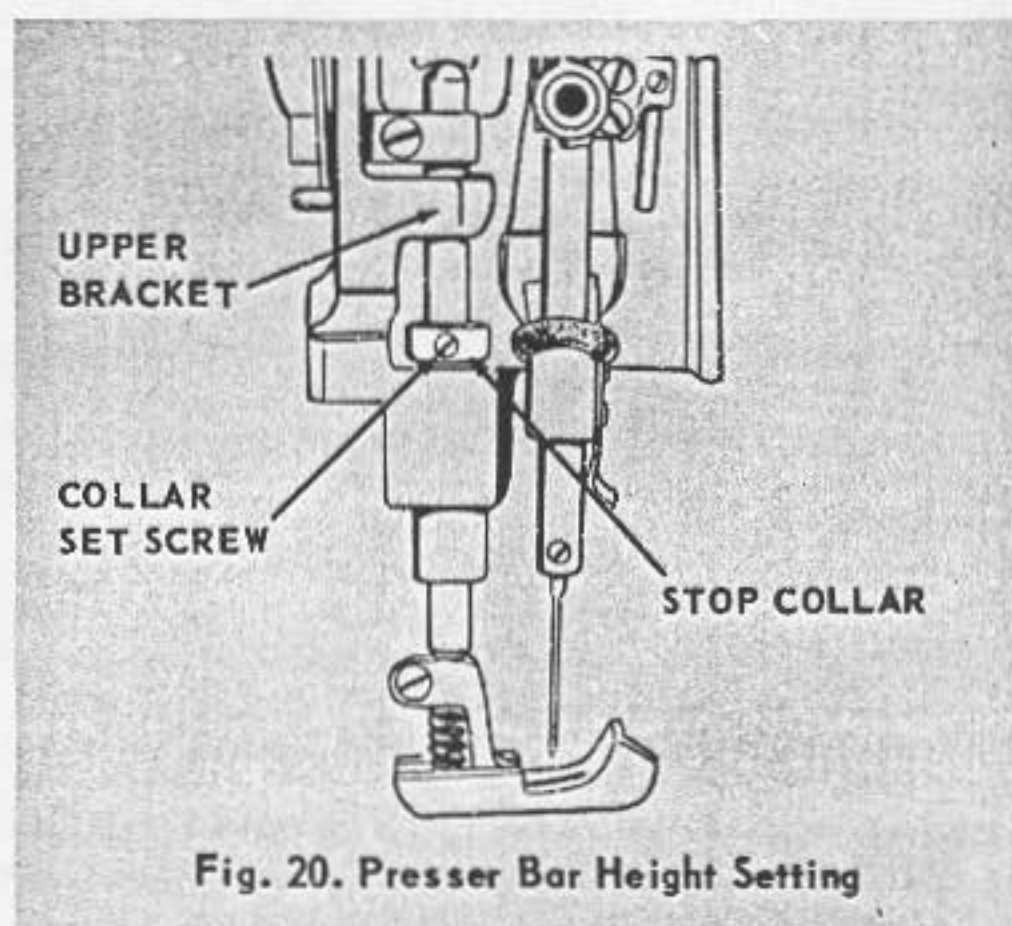


Fig. 21. Spreader Points in Relation to Loopers

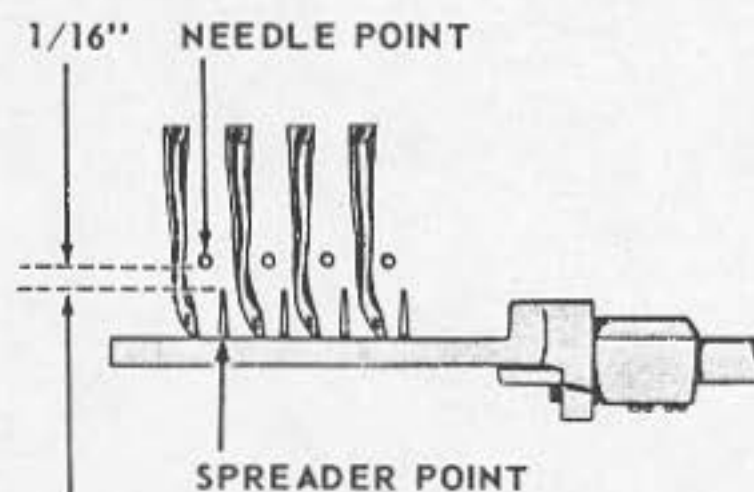


Fig. 22. Spreader Points in Relation to Needles