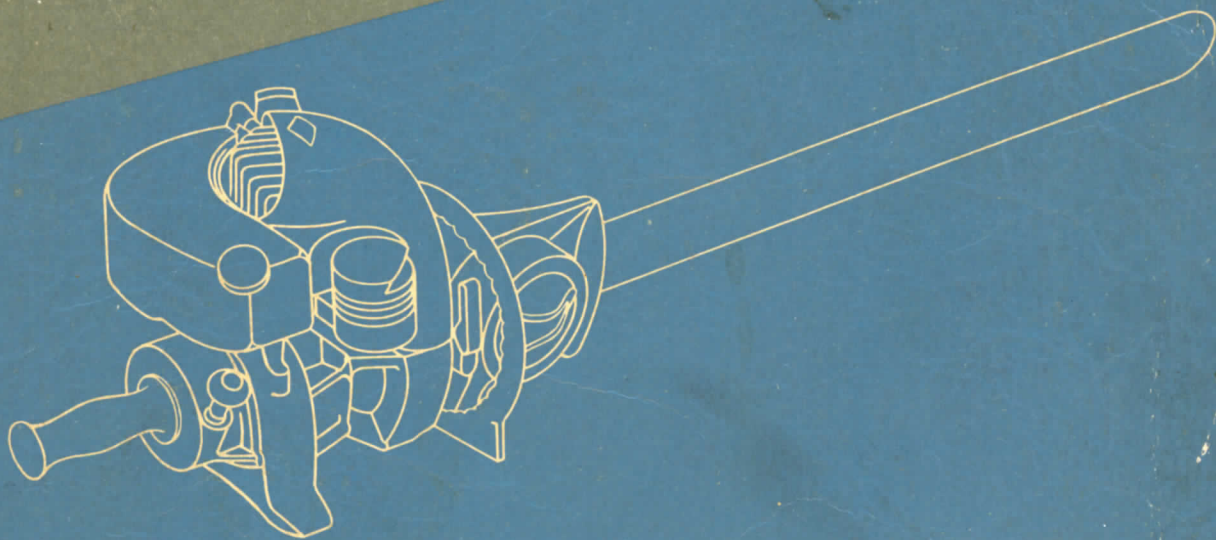


INSTRUCTIONS AND PARTS MANUAL



TITAN 40

SERIES



TITAN CHAIN SAWS, INC.

SEATTLE 4, WASHINGTON, U.S.A.

ISSUE NO. 2

INSTRUCTION & PARTS MANUAL FOR SERVICING & REPAIR

PRICE, 50 CENTS

This manual was prepared to assist you in the efficient operation and maintenance of your Titan Series 40 Power Chain Saw.

Minor repairs and parts orders will be expedited greatly if the parts break-down illustrations and parts list are followed.

We suggest all major repairs and overhauls be done by your authorized Titan Dealer.

All Titan Series 40 Chain Saws are completely tested and inspected before shipment.

Minimum charge on all orders placed with Titan Chain Saws Inc., will be \$1.00.

GENERAL INFORMATION

MOTOR LUBRICATION

For proper lubrication of all internal moving parts, mix the gas and oil as follows: Use S.A.E. 60 weight oil mixed 1¼ pints oil to **one gallon** of regular gasoline. Use **regular gas only**—DO NOT USE ETHYL GAS!!

Gas and oil must be mixed well and be free of water, sludge and dirt.

CHAIN LUBRICATION

Fill chain oil tank with good grade S.A.E. 20 lubricating oil. This oil must be clean.

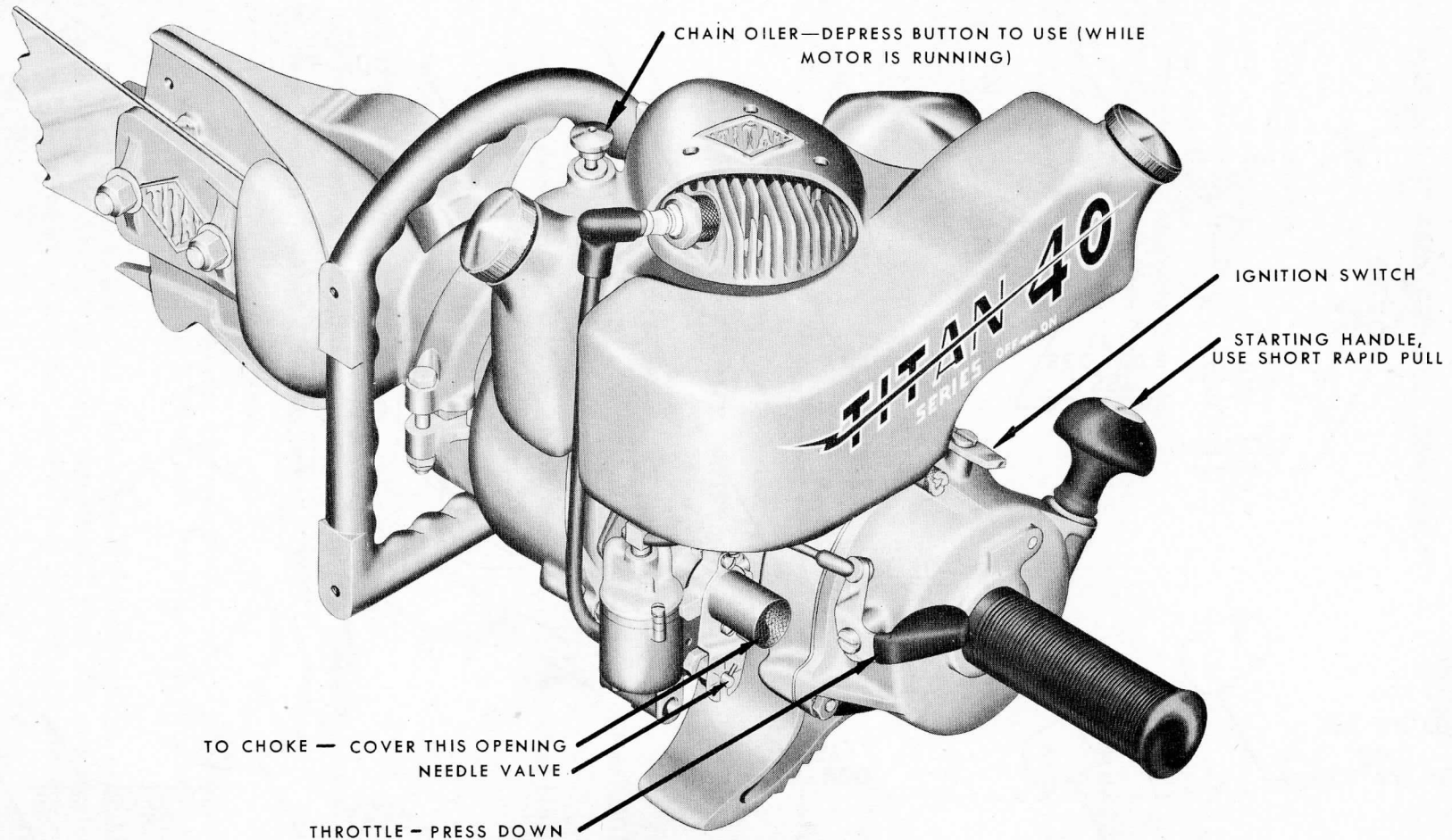
PARTS ORDERING

When ordering replacement parts, it is important to give the following information:

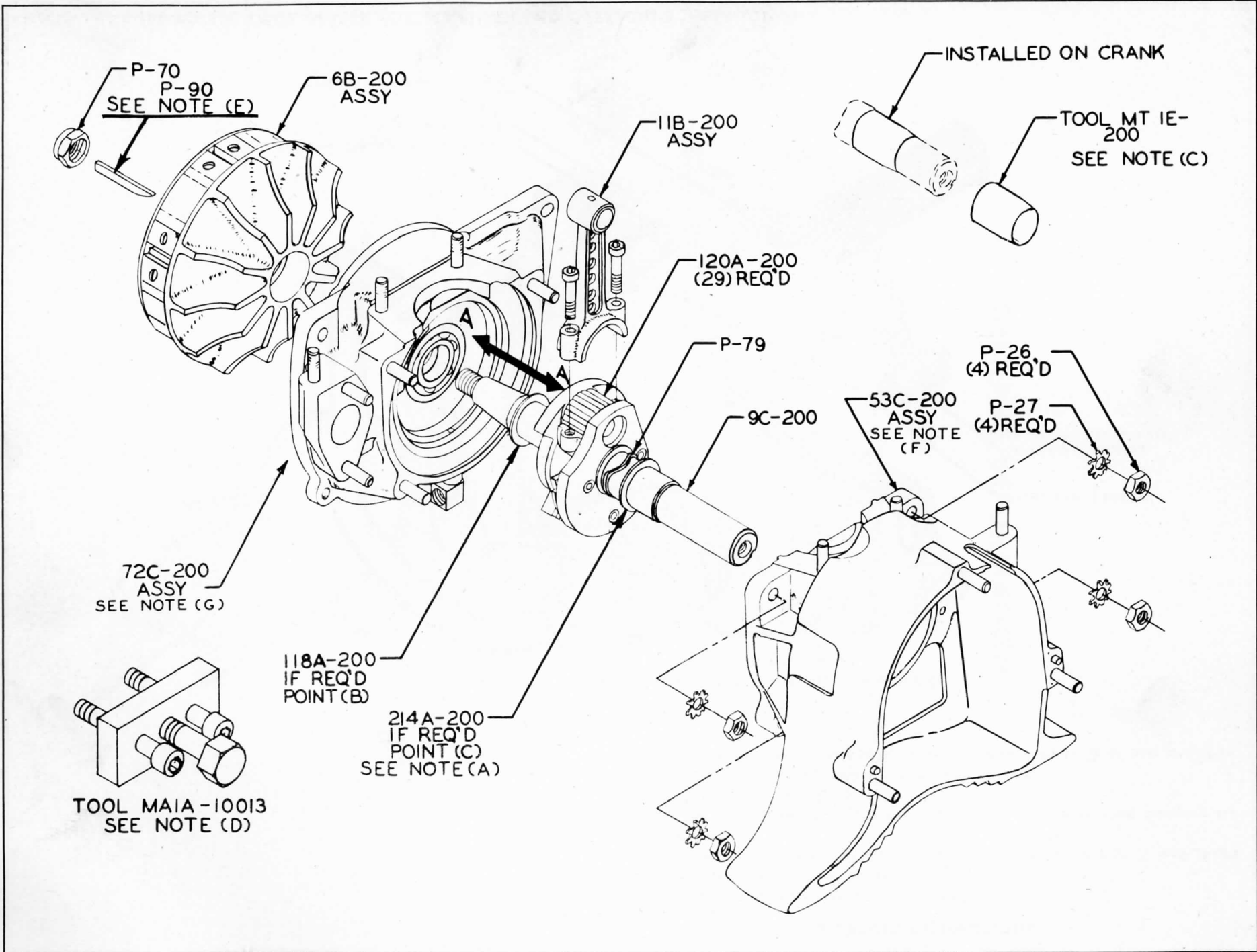
1. The model and serial number of your machine.
2. The part number, description and quantity required of the parts.
3. Complete and detailed shipping instructions.

STARTING INSTRUCTIONS

1. Open the needle valve on carburetor $1\frac{1}{2}$ turns.
2. Turn the ignition switch off (to the left).
3. Choke motor as shown in illustration and give starter rope from 5 to 8 **short** rapid pulls.
4. Turn the ignition switch on (to the right), pull the starter rope (keeping the throttle fully depressed).
5. To prevent damage, do not race motor with no load.
6. After motor is warm, close needle valve to approximately $\frac{7}{8}$ of one turn open.



NOTE: BE SURE TO SEE YOUR DEALER FOR STARTING AND OPERATING INSTRUCTIONS.



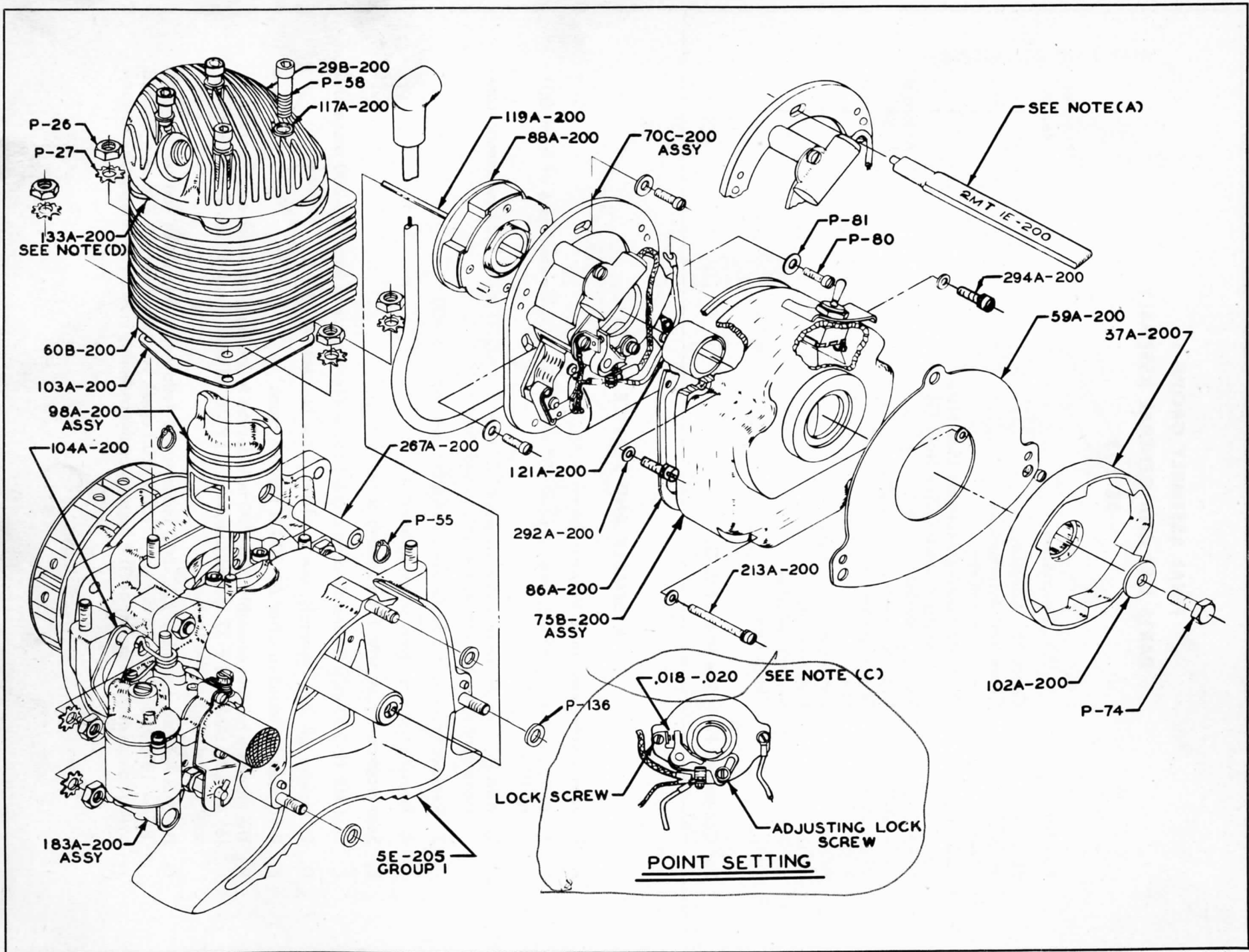
FINAL ASSEMBLY GROUP 1
PARTS LIST AND GENERAL ASSEMBLY
5E-205

Part No.	Description	Number Req'd.
6B-200	Clutch Fan Assembly	1
9C-200	Crankshaft Assembly	1
11B-200	Conrod Assembly	1
* 53C-200	Magneto Housing Assembly (See Note F)	1
* 72C-200	Fan Housing Assembly (See Note G)	1
118A-200	Shim (Crankshaft)	As Req'd.
120A-200	Conrod Rollers	29
214A-200	Shim (Crankshaft)	As Req'd.
P-26	Nut	4
P-27	Lockwasher	4
P-70	Flywheel Nut	1
P-79	Wiggle Washer	1
P-90	Clutch Key	1

* For Component Parts See Notes F & G.

ASSEMBLY AND SERVICE NOTES

- A. For rotary valve clearance between points A-A.
 1. Before rod is assembled, shim at point "B" with 118A-200 for clearance of from .001 to .004.
 2. Add P-79 as shown and shim at point "C" with 214A-200 for a 1.32 maximum crank movement when the crankcases are joined. See Note "C".
 3. Remove crank and add rollers 120A-200 and rod 11B-200.
 4. Reassemble with shims as established.
- B. Seal crankcase joint with Titan sealing compound.
- C. Tool MT 1E-200 must be installed on crank before inserting crank into 53C-200 assembly.
- D. To remove 6B-200 assembly, use flywheel puller No. MA1A-10013.
- E. P-90 must be installed after 6B-200 is tight on crank.
- F. The magneto housing assembly 53C-200 includes the following parts which can be ordered: (6) 4A-134 studs, (2) P-37 dowel pins, and (1) P-36 oil seal. The bearing in this assembly must be installed at the factory.
- G. The fan housing assembly 72C-200 includes the following parts which can be ordered: (8) 4A-134 studs, (1) P-36 oil seal, (1) 55A-200 check valve and (1) 6A-206 stud located on top hole of carburetor flange. The bearing on this assembly must be installed at the factory.

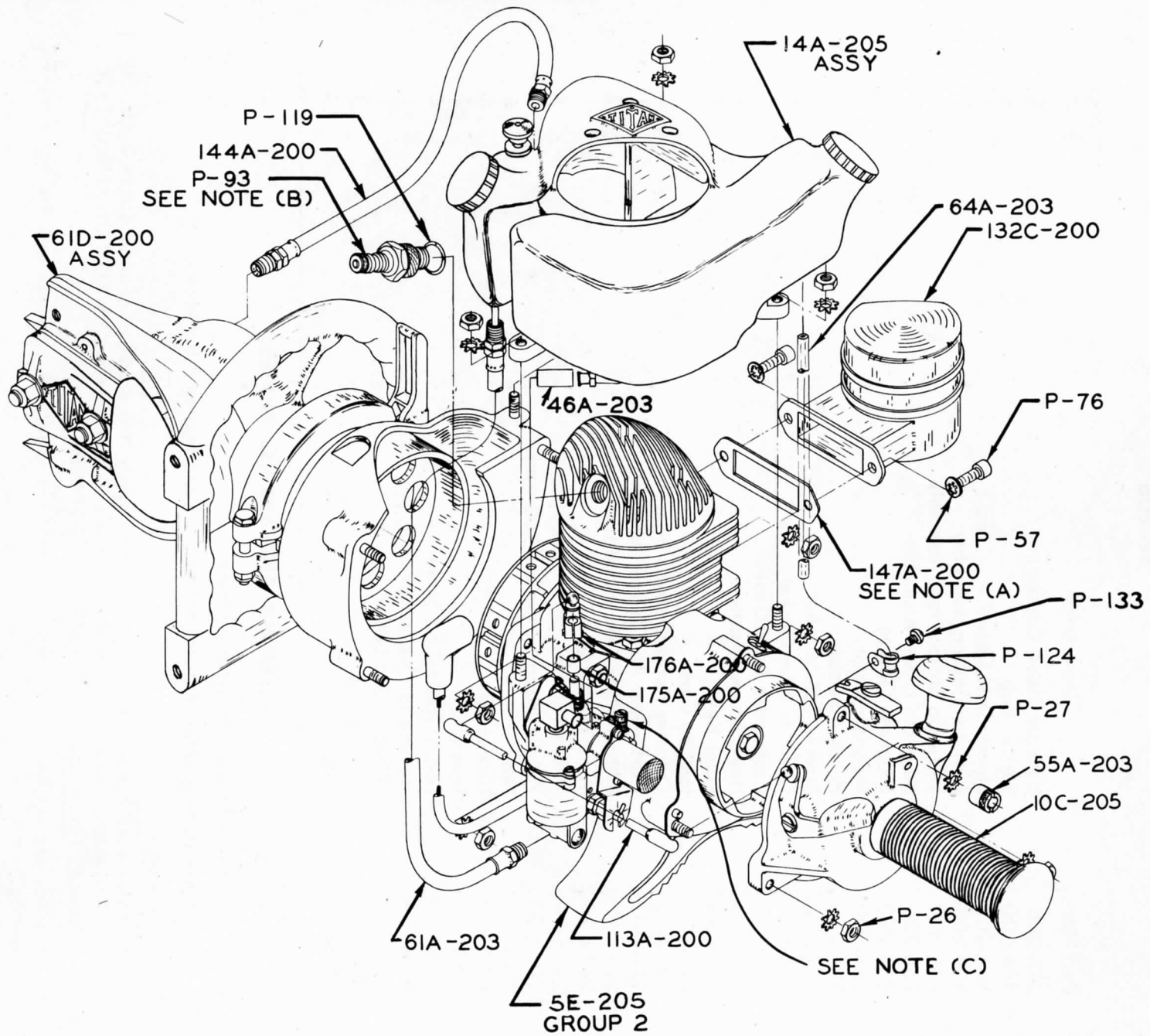


FINAL ASSEMBLY GROUP 2
PARTS LIST AND GENERAL ASSEMBLY
5E-205

Part No.	Description	Number Req'd.
29B-200	Cylinder Head Casting	1
57A-200	Starter Cup	1
59A-200	Starter Dust Guard	1
60B-200	Cylinder Casting Assembly	1
70C-200	Magneto Stator Plate Assembly	1
75B-200	Magneto Cover Assembly	1
86A-200	Magneto Gasket	1
88A-200	Magneto Rotor	1
98A-200	Piston Assembly	1
102A-200	Starter Cup Washer	1
103A-200	Cylinder Base Gasket	1
104A-200	Carburetor Base Gasket	1
117A-200	Head Screw Washer	4
119A-200	Rotor Key	1
121A-200	Ignition Cam	1
133A-200	Cylinder Head Gasket	1
13A-205	Carburetor Air Cleaner Assembly	1
213A-200	Fillister Head Screw and Lockwasher	2
267A-200	Wrist Pin (Plain)	1
292A-200	Washer (Plain)	4
294A-200	Fillister Head Screw and Lockwasher	2
P-26	Nut	6
P-27	Lockwasher	6
P-55	Truarc	2
P-58	Socket Head Cap Screw	4
P-74	Hex Head Cap Screw	1
P-80	Fillister Head Screw	3
P-81	Washer (Plain)	3
P-136	Washer (Plain)	3

ASSEMBLY AND SERVICE NOTES

- A. To time motor for correct spark advance:
 - 1. Locate stator plate with tool 2MT 1E-200 and tighten P-80 screws.
- B. Lubrication
 - 1. After each hundred hours of operation, apply two drops of a good grade S.A.E. 60 oil to the cam oiler felt. Blot off any excess oil with a clean cloth. **KEEP OIL AND GREASE AWAY FROM THE CONTACT POINT SURFACES!!!**
- C. If points are not set within tolerance noted, the spark will be weak and the motor hard starting.
- D. After installing new head gasket 133A-200 with the narrow side of aluminum flange up, run motor approximately 3 minutes, cool off, and retighten head screws, P-58.
- E. Grease felt in magneto cover 75B-200 with Lubriplate before inserting starter cup 57A-200.
- F. To tighten head, press down on center of head and tighten (4) screws evenly, thus precluding any possibility of tipping the head.



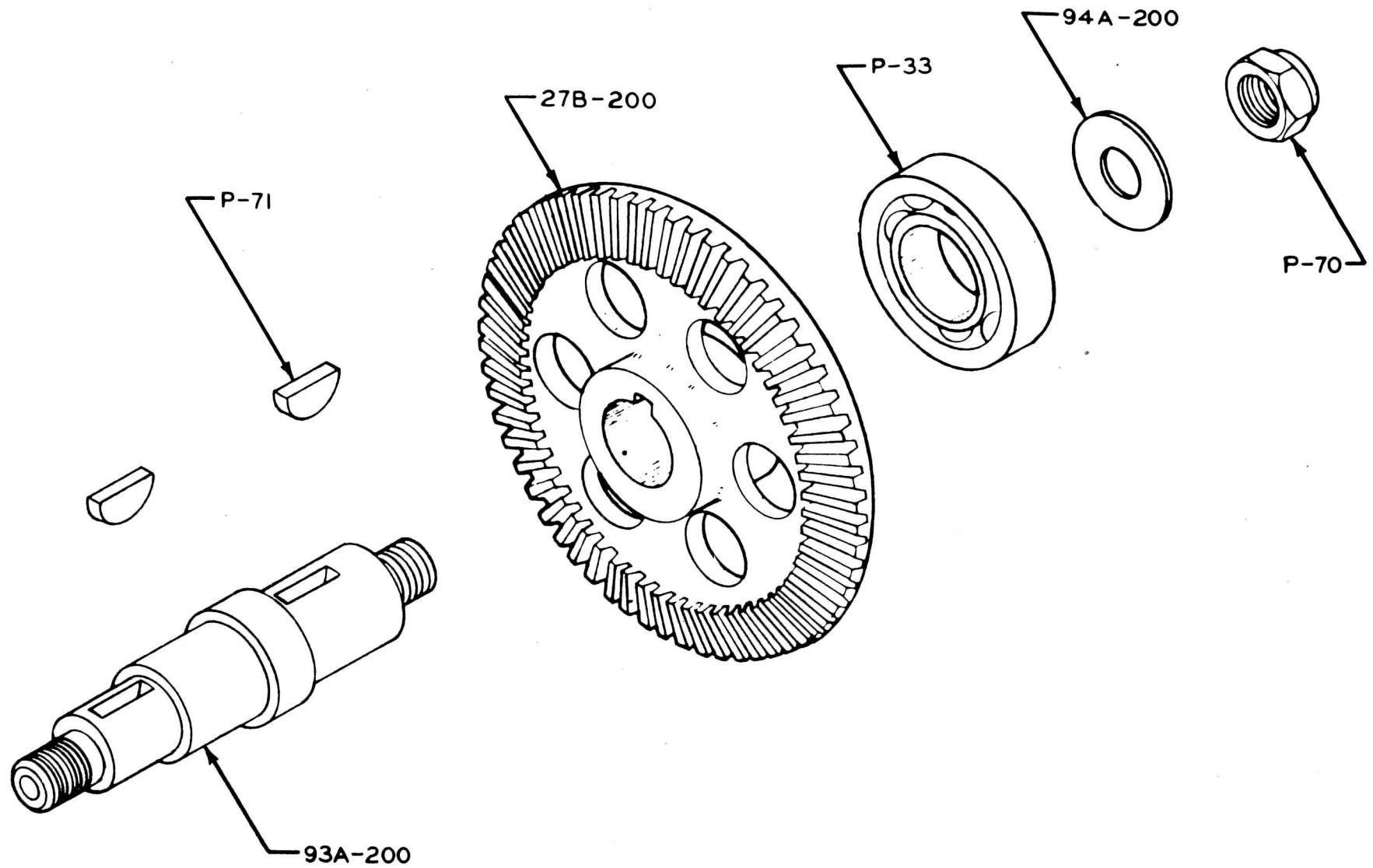
FINAL ASSEMBLY GROUP 3
PARTS LIST AND GENERAL ASSEMBLY
5E-205

Part No.	Description	Number Req'd.
*61D-200	Transmission Assembly	1
113A-200	Throttle Link	1
132C-200	Muffler	1
144A-200	Oil Line	1
147A-200	Muffler Gasket	As Req'd.
175A-200	Throttle Shaft Spacer	1
176A-200	Throttle Clamp Lever Assembly	1
46A-203	Gas Hose	1
55A-203	Nut Slotted	1
61A-203	Pressure Line Assembly	1
64A-203	Vent Hose	1
10C-205	Starter End Assembly	1
14A-205	Air Scoop Assembly	1
P-26	Nut	9
P-27	Lock Washer	10
P-57	Lock Washer	2
P-76	Socket Head Cap Screw	2
P-93	Spark Plug J-3 (See Note B)	1
P-119	Gasket (Solid Copper)	1
P-124	Clamp	1
P-133	Round Head Screw	1

ASSEMBLY AND SERVICE NOTES

- A. Use one or more gaskets to give muffler proper clearance from air scoop. After installing a new gasket it is necessary to retighten the two muffler screws (P-76) after approximately 10 to 15 minutes running to take care of the initial gasket shrinkage.
- B. Before installing plug, coat threads with a small amount of vaseline saturated with graphite. Use a solid copper gasket instead of the collapsible type. Run motor 5 to 10 minutes, retighten plug to seat gasket properly. ~~If saw is used at altitudes of 3000 feet or over,~~ better results are obtained by using a Champion J-6-J plug number P-114. Terminal nut P-118 (knurled nut type) or P-112 (post type) may be used, depending on the type of terminal used on the spark plug wire.
- C. Before installing airscoop, screw idling adjusting screw closed, then open one half turn. This has been found to be the correct setting in most cases and will probably eliminate the need of any further idle adjustments after the air scoop is installed.

*NOTE: Transmission assembly 61D-200 must be replaced by transmission assembly 284D-200 if the bow saw is used or transmission housing casting 65D-200 must be replaced by transmission housing casting 283D-200.

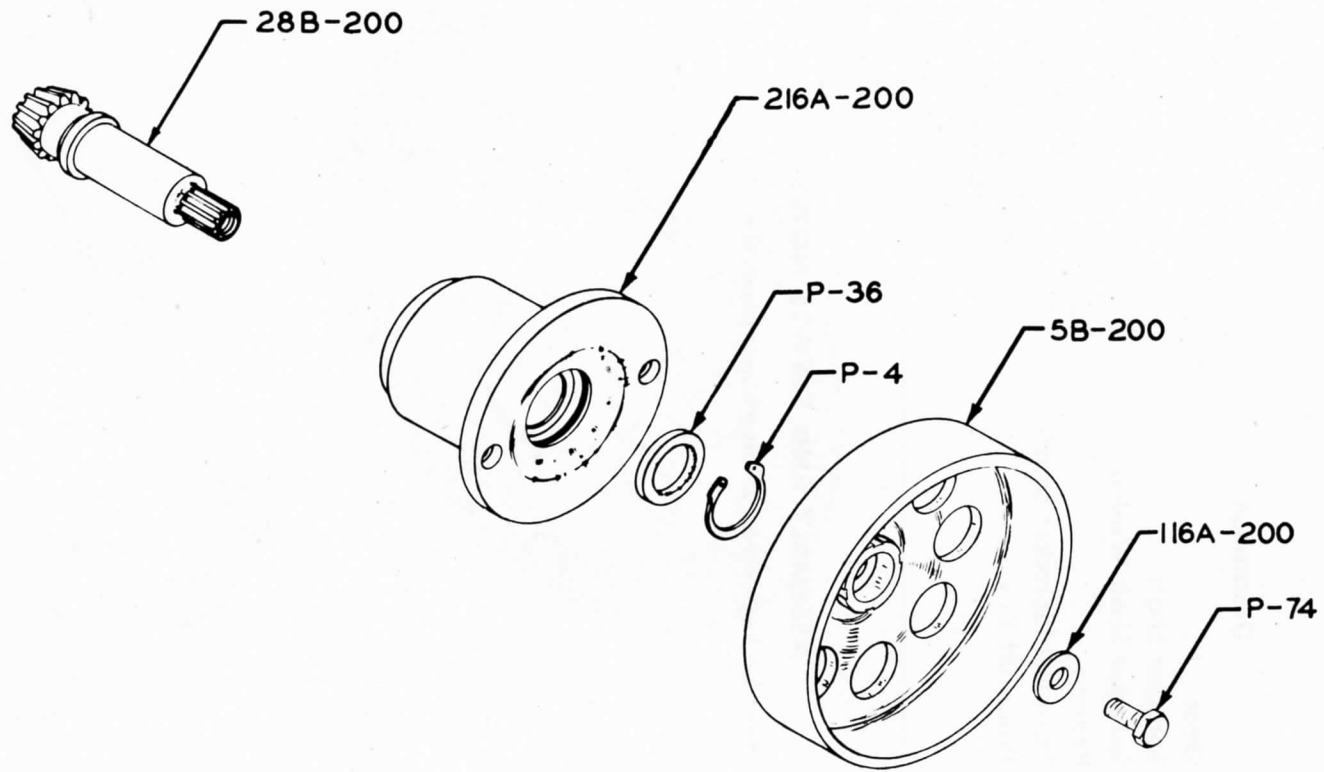


**SPROCKET SHAFT ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
115B-200**

Part No.	Description	Number Req'd.
27B-200	Gear	1
93A-200	Sprocket Shaft	1
94A-200	Sprocket Shaft Washer	1
P-33	Bearing	1
P-70	Fibre Nut (Sprocket Shaft)	1
P-71	Woodruff Key	2

ASSEMBLY AND SERVICE NOTES

NOTE: Ball Bearings must be kept clean to insure maximum life.

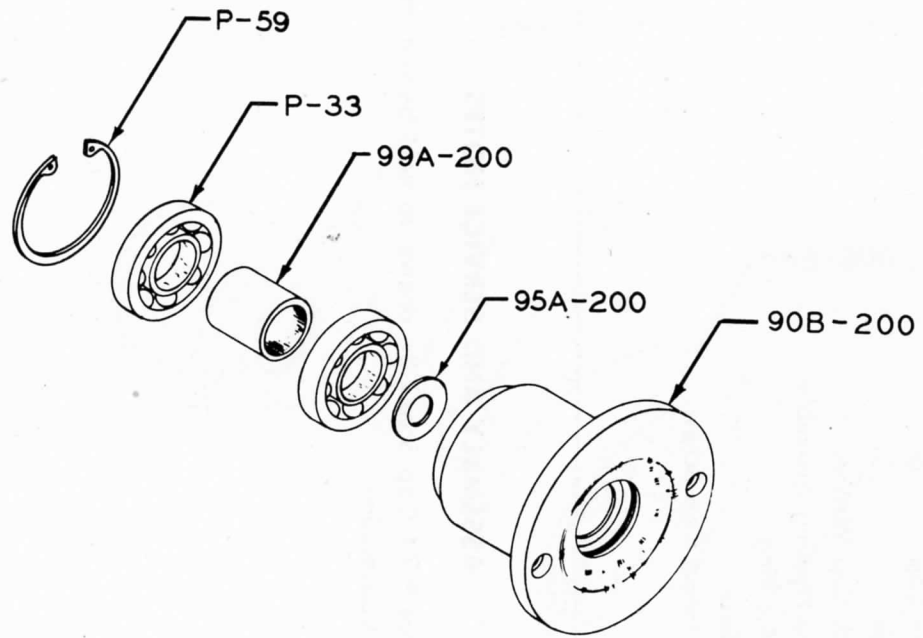


**PINION CLUTCH CUP ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
114C-200**

Part No.	Description	Number Req'd.
5B-200	Clutch Cup	1
28B-200	Pinion	1
116A-200	Clutch Cup Washer	1
216A-200	Pinion Housing Assembly	1
P-4	Tru-Arc Ring	1
P-36	Oil Seal	1
P-74	Hex Head Cap Screw	1

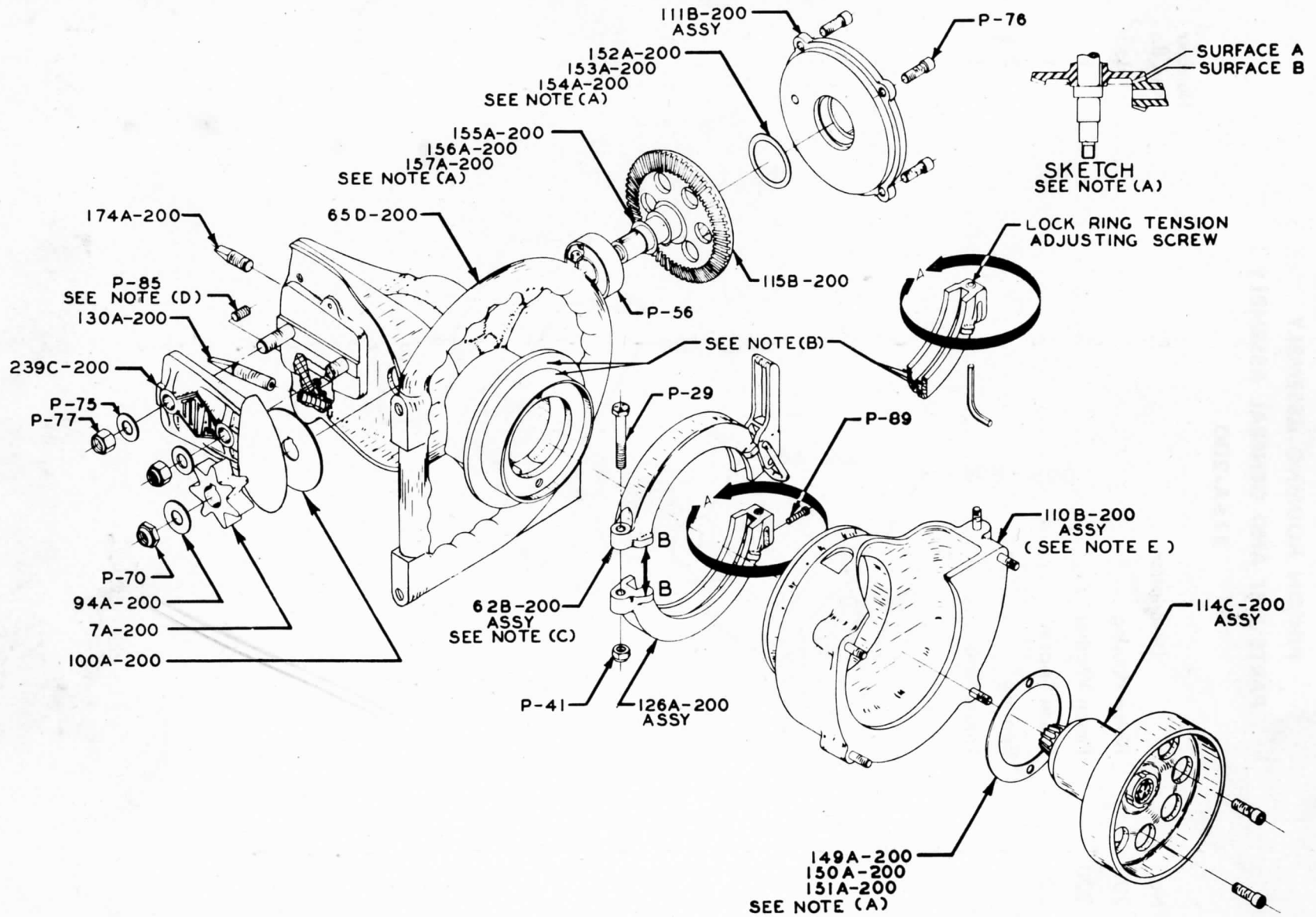
ASSEMBLY AND SERVICE NOTES

NOTE: It is important that P-74 Cap Screw be drawn up tight before installing this Assembly, 114C-200, into transmission.



**PINION HOUSING ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
216A-200**

Part No.	Description	Number Req'd.
90B-200	Pinion Housing	1
95A-200	Pinion Washer	1
99A-200	Pinion Spacer	1
P-33	Bearing	2
P-59	Truarc Ring	1



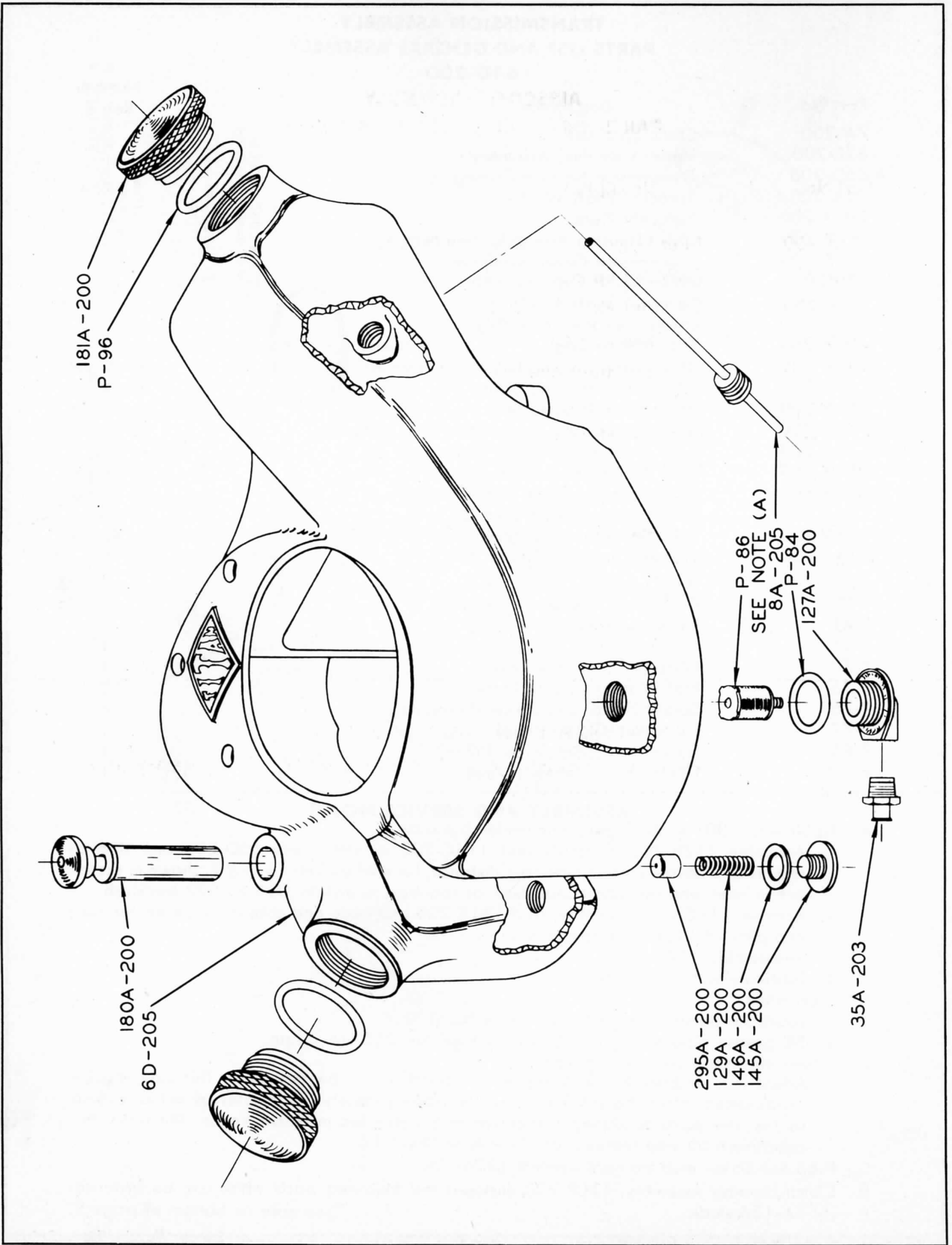
**TRANSMISSION ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY**

* 61D-200

Part No.	Description	Number Req'd.
7A-200	Chain Sprocket	1
62B-200	Upper Lock Ring Assembly	1
* 65D-200	Transmission Housing Casting	1
94A-200	Sprocket Shaft Washer	1
100A-200	Sprocket Plate	1
110B-200	Clutch Housing Assembly (See Note E)	1
111B-200	Transmission Cover Assembly	1
114C-200	Pinion Clutch Cup Assembly	1
115B-200	Sprocket Shaft Assembly	1
126A-200	Lower Lock Ring Assembly	1
130A-200	Transmission Dog	1
149A-200	.003 Pinion Housing Shim (See Note A)	As Req'd.
150A-200	.005 Pinion Housing Shim	As Req'd.
151A-200	.010 Pinion Housing Shim	As Req'd.
152A-200	.003 Transmission Cover Shim (See Note A)	As Req'd.
153A-200	.005 Transmission Cover Shim	As Req'd.
154A-200	.010 Transmission Cover Shim	As Req'd.
155A-200	.003 Sprocket Shaft Shim (See Note A)	As Req'd.
156A-200	.005 Sprocket Shaft Shim	As Req'd.
157A-200	.010 Sprocket Shaft Shim	As Req'd.
174A-200	Transmission Dog (Small)	1
239C-200	Safety Clamp Plate	1
P-29	Hex Head Cap Screw (Swivel)	1
P-41	Fibre Nut (Swivel)	1
P-56	Bearing	1
P-70	Fibre Nut (Sprocket Shaft)	1
P-75	Flat Washer (Clamp Plate)	2
P-76	Socket Head Cap Screw (Pinion Hsg.)	6
P-77	Fibre Nut (Clamp Plate)	2
P-85	Socket Head Set Screw (Wire)	1
P-89	Fillister Head Screw (Wire)	1

ASSEMBLY AND SERVICE NOTES

- A. To Shim for .001 to .003 gear and pinion backlash:
1. Assemble 115B-200 assembly and 114C-200 assembly into 65D-200 and shim as required to obtain correct mounting distance, (or until surfaces A and B, shown in sketch, are in line), and use additional shims as required to obtain .001 to .003 backlash.
 2. Remove 114C-200 assembly, add 111B-200 assembly and shim as required for zero end play of 115B-200 assembly.
 3. Reassemble 114C-200.
 4. Lubricate with Lubriplate No. 310.
- B. Lubrication.
1. Lubricate points noted with Lubriplate No. 310.
 2. Fill grease plug on 111B-200 with 1/4 tube No. 310 Lubriplate.
- C. Proper clearance on lock ring lugs.
1. Adjust lugs at point B-B with lug on 110B-200 for 1/64 clearance. This may require readjustment after the unit has been run approximately 30 minutes of actual cutting as the new parts in seating themselves may leave too much clearance. This is not the adjustment for ring tension, see View A on Sheet 14.
- D. P-85 Set Screw must be tight against 130A-200.
- E. Clutch Housing Assembly, 110B-200, includes the following parts which can be ordered:
(5) 4A-134 studs. *See note on bottom of page 9.

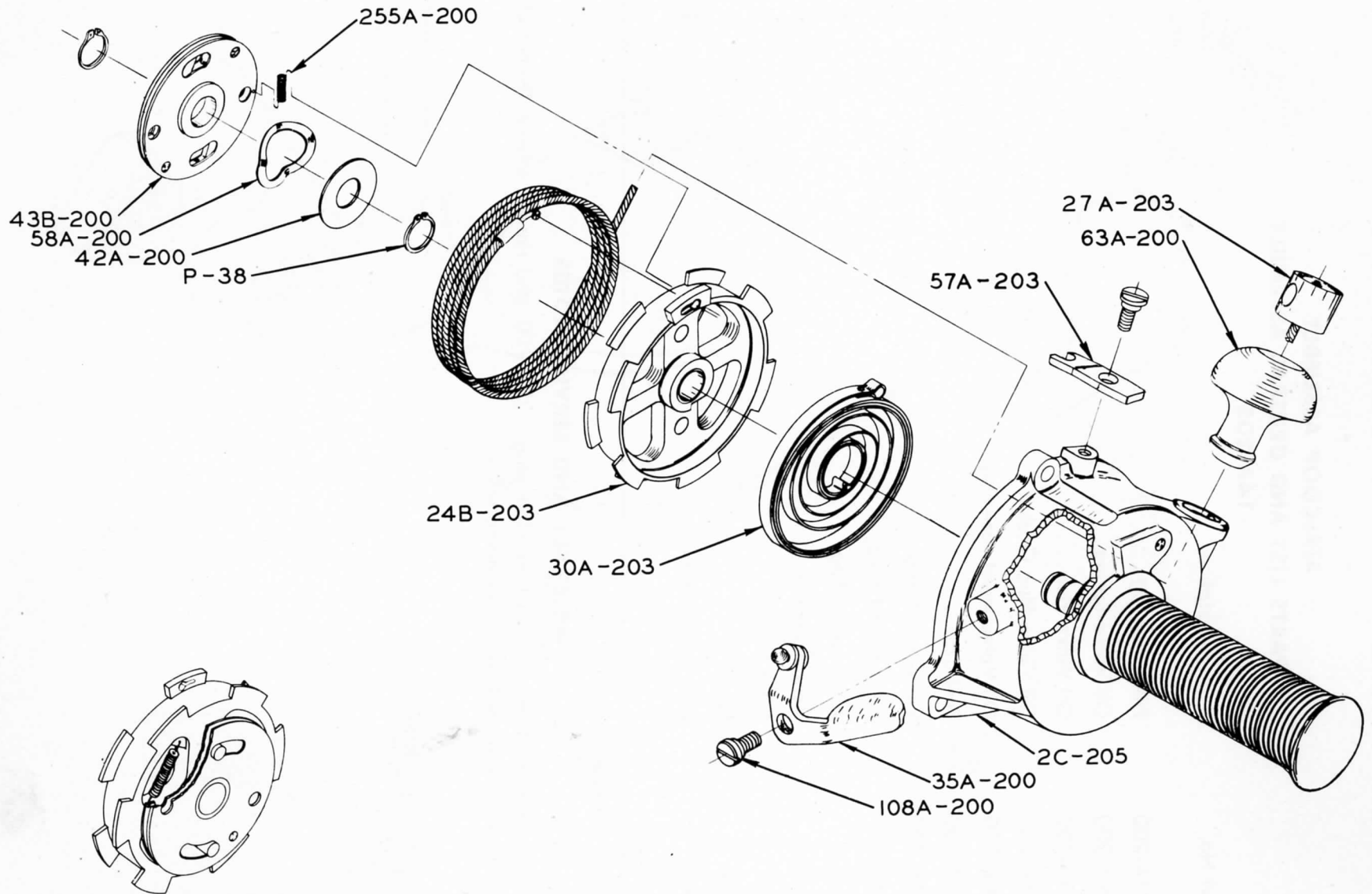


**AIRSCOOP ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
14A-205**

Part No.	Description	Number Req'd.
127A-200	Filter Plug	1
129A-200	Oil Valve Spring	1
145A-200	Oil Valve Plug	1
146A-200	Oil Valve Plug Gasket	1
180A-200	Oil Valve Insert Assembly	1
181A-200	Fuel Cap	2
295A-200	Oil Valve Plunger	1
35A-203	Filter Hose Fitting	1
6D-205	Airscoop Casting	1
8A-205	Vent Assembly	1
P-84	Filter Washer	1
P-86	Filter	1
P-96	Fuel Cap Gasket	2

ASSEMBLY AND SERVICE NOTES

A. To clean filter, P-86, remove from filter plug, 127A-200, and rinse in solvent. Do not blow with air hose as that will cause damage.



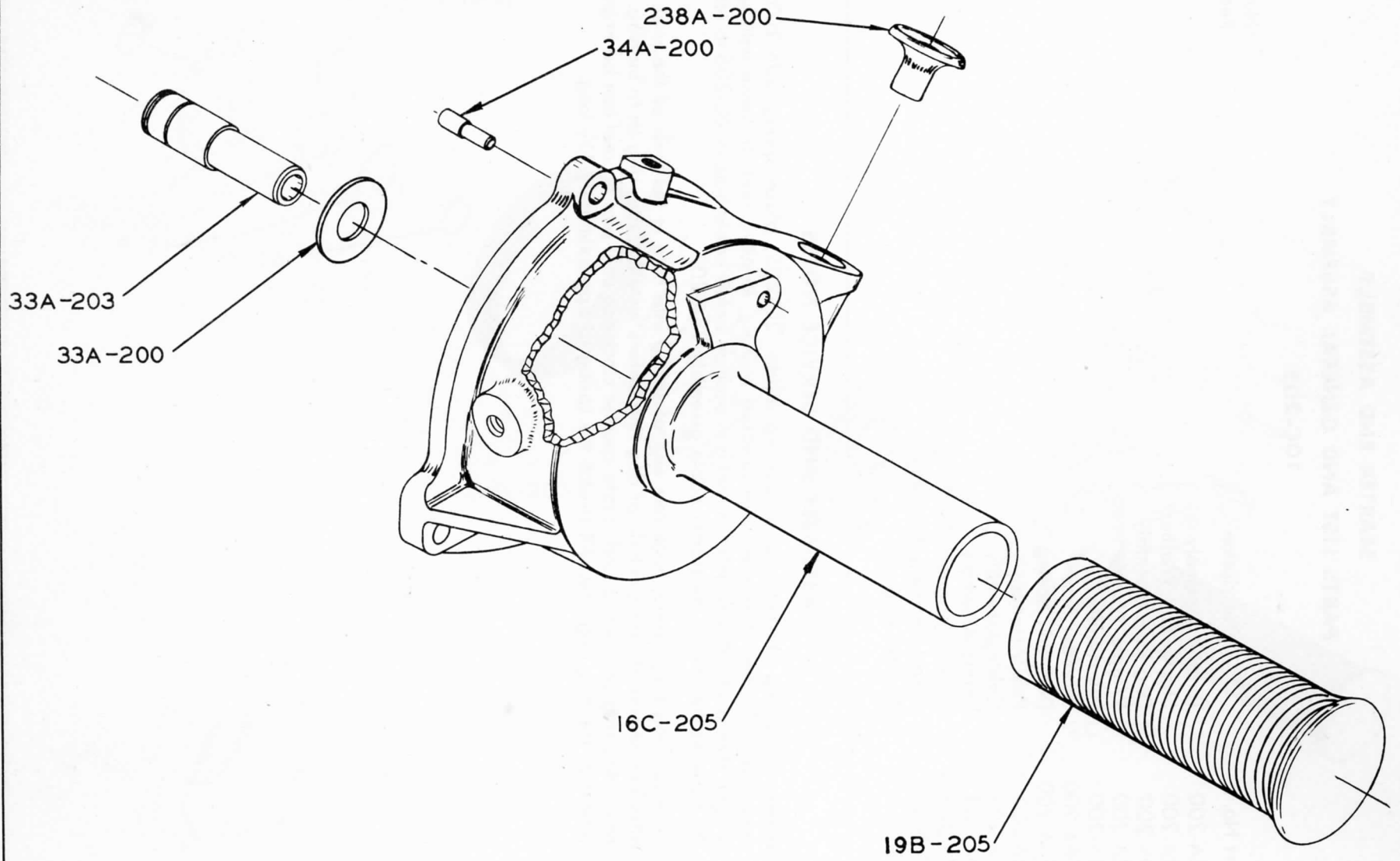
CORRECT POSITION OF SPRING
WHEN INSTALLED

STARTER END ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
10C-205

Part No.	Description	Number Req'd.
35A-200	Throttle Assembly	1
42A-200	Starter End Washer	1
43B-200	Dog Ring Assembly	1
58A-200	Wiggle Washer	1
63A-200	Pull Handle	1
108A-200	Shoulder Screw	2
255A-200	Dog Ring Spring	1
24B-203	Reel Assembly	1
27A-203	Cable Assembly	1
30A-203	Spring Assembly	1
57A-203	Lever—Magneto Switch	1
2C-205	Starter Housing Assembly	1
P-38	Tru-Arc Ring	2

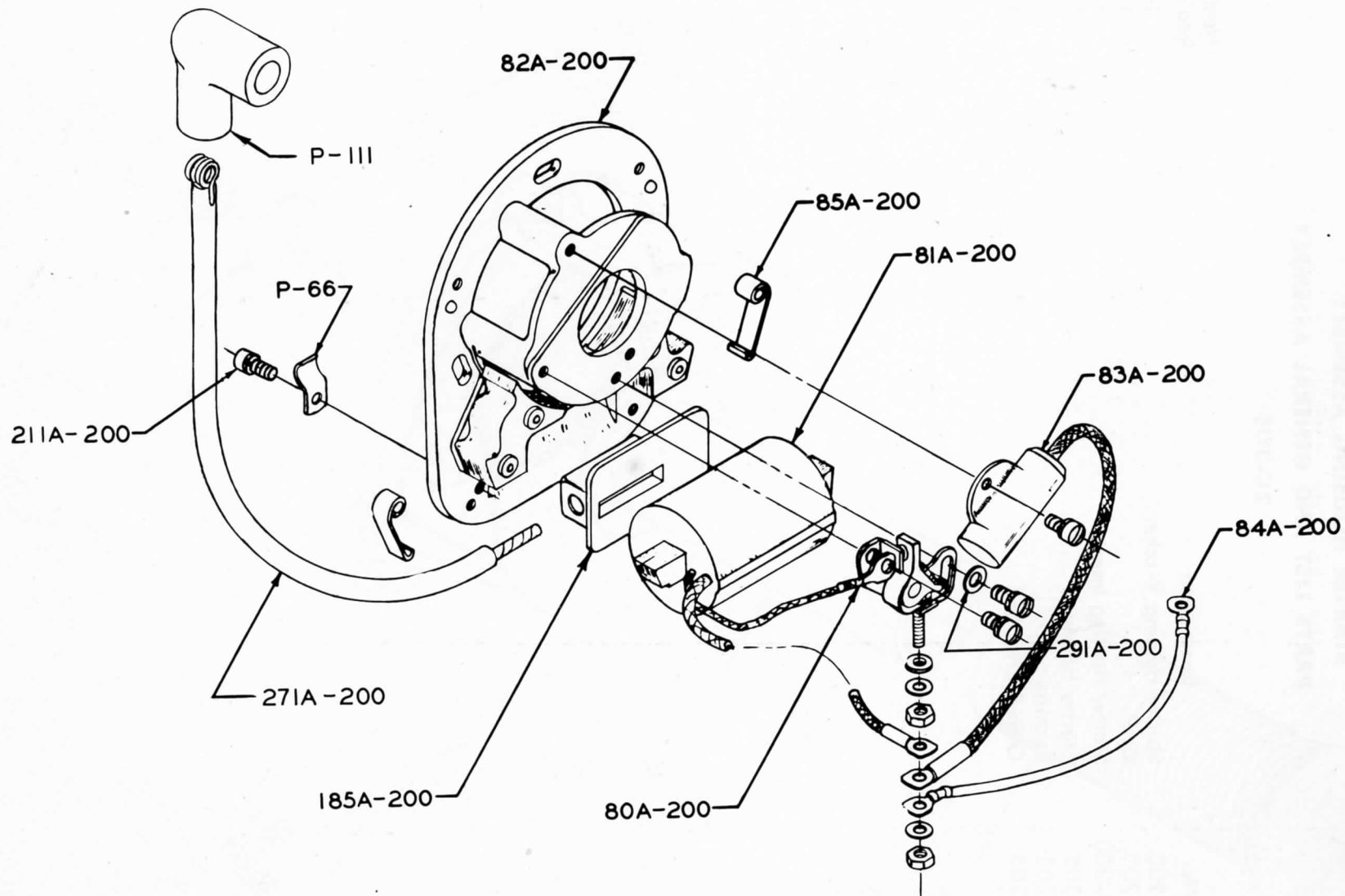
ASSEMBLY AND SERVICE NOTES

- A. When assembling starter, grease bushing inside, 2C-205, place spring 30A-203, into reel, 24B-203, then slide reel over greased bushing. Revolve reel clockwise until spring is tight, then slack off until notch in reel is in position below cable hole in 2C-205 to receive the hook on the end of the starter cable assembly 28A-203.
- B. To install dog ring spring, hook one end of spring into hole in the web of the reel, then attach loose end of spring in hole of dog ring before installing dog ring on to bushing. Then install dog ring on bushing and rotate counter clockwise until pins on reel can be engaged in slots of the dog ring. This will stretch the spring to approximately 1 $\frac{1}{8}$ long.



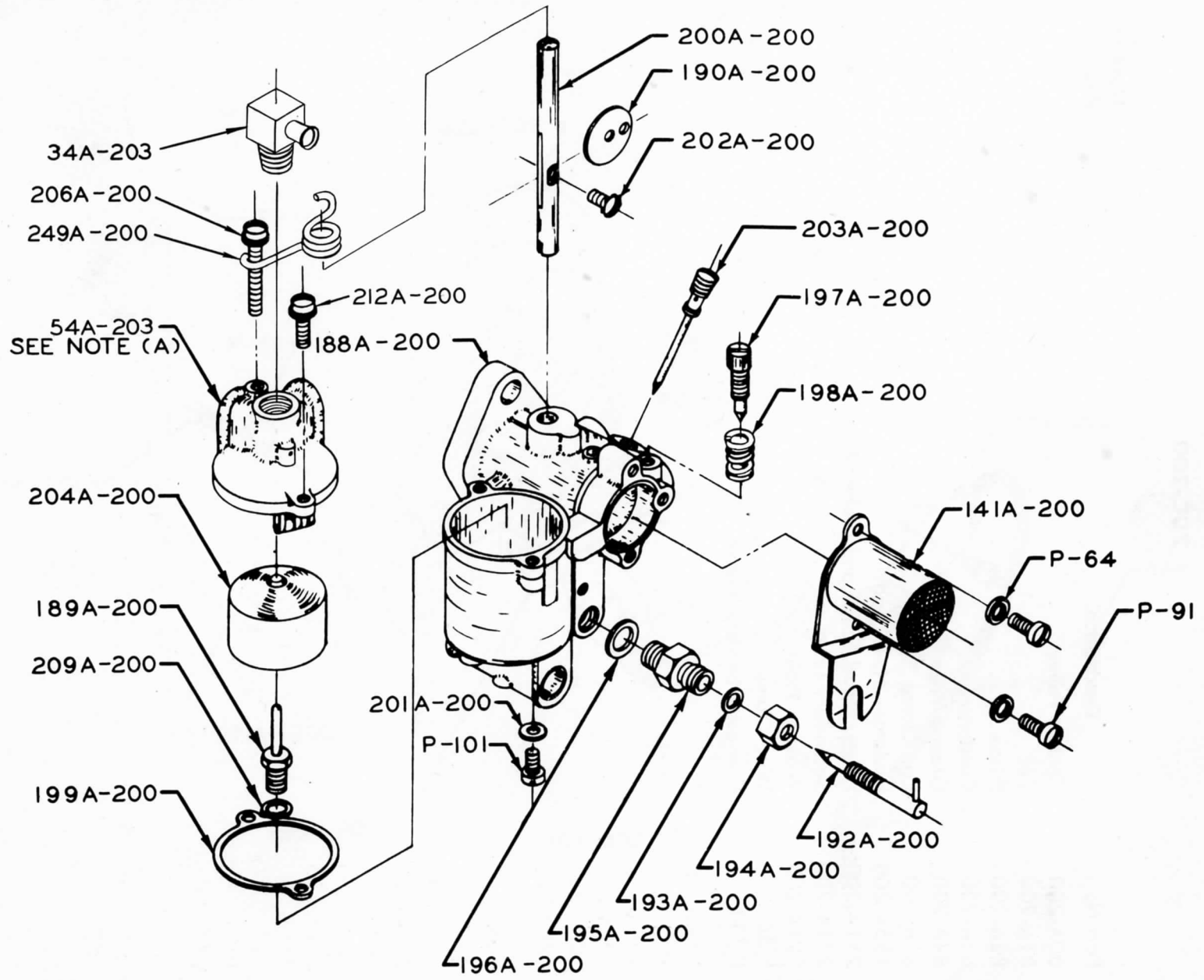
STARTER HOUSING ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
2C-205

Part No.	Description	Number Req'd.
33A-200	Starter Housing Washer	1
34A-200	Rivet	1
238A-200	Starter Housing Insert	1
16C-205	Starter Housing	1
33A-203	Bushing	1
19B-205	Grip-Starter End	1



**MAGNETO STATOR PLATE ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
70C-200**

Part No.	Description	Number Req'd.
80A-200	Contact Points	1
81A-200	Coil	1
82A-200	Frame	1
83A-200	Condenser	1
84A-200	Ground Wire	1
85A-200	Coil Clamp	2
185A-200	Insulator—H. T. Lead	1
211A-200	Fillister Head Screw and Lockwasher	4
271A-200	Secondary Lead	1
291A-200	Washer Plain	1
P-66	Wire Clamp	1
P-111	Connector Sealing Sleeve	1



**CARBURETOR AIR CLEANER ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
13A-205**

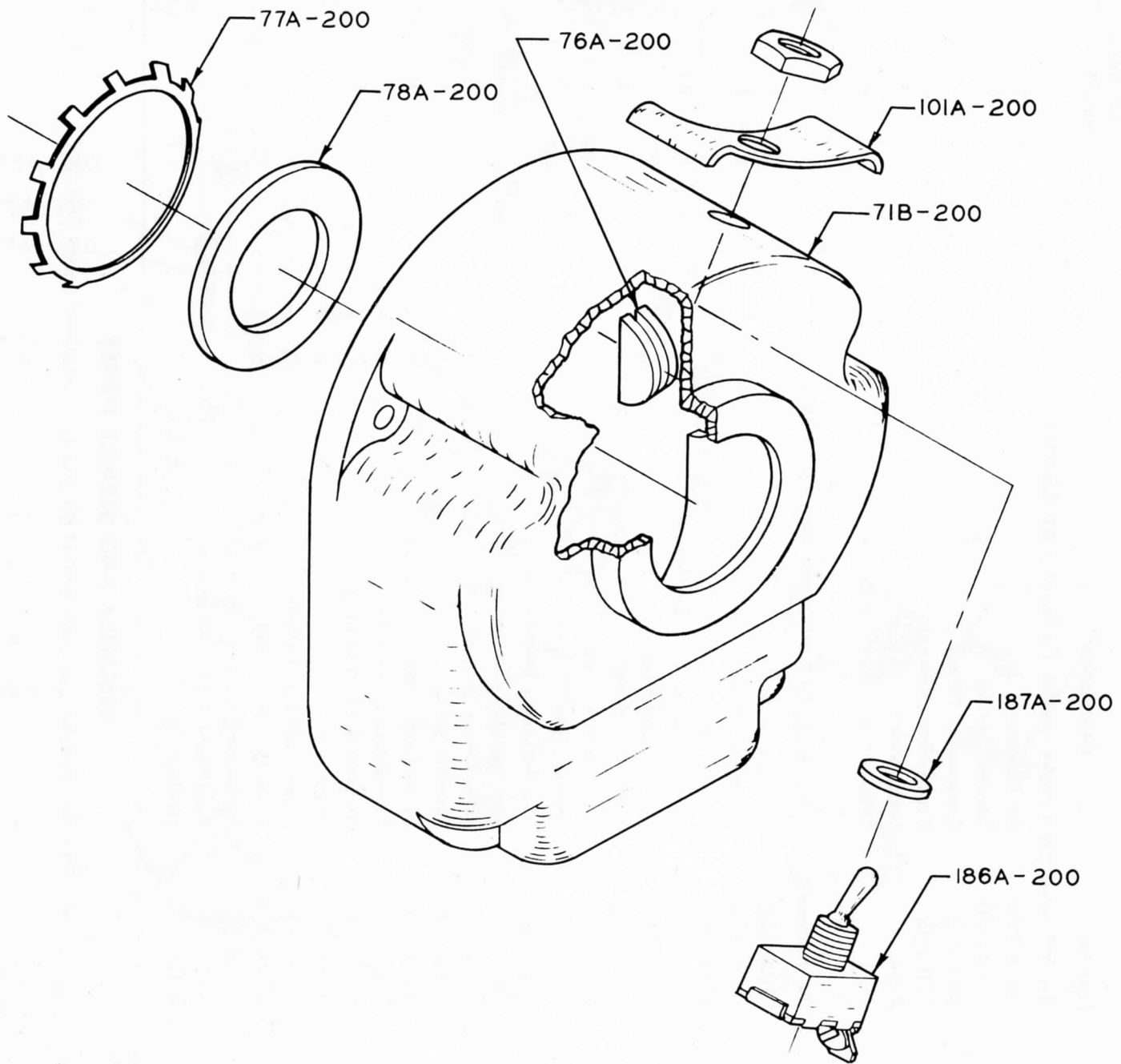
Part No.	Description	Number Req'd.
The following parts make up the Carburetor Air Cleaner Assembly 13A-205		
141A-200	Air Cleaner	1
249A-200	Throttle Spring	1
34A-203	Carburetor Fitting	1
11B-205	Carburetor Assembly	1
P-64	Lockwasher	2
P-91	Fillister Head Machine Screw	2

The following parts make up the Carburetor Assembly 11B-205

188A-200	Carburetor Body	1
189A-200	Float Pin Guide	1
190A-200	Throttle Shutter	1
192A-200	Needle Valve Adjusting Screw	1
193A-200	Stuffing Box Packing	1
194A-200	Stuffing Box Nut	1
195A-200	Stuffing Box Gland	1
196A-200	Stuffing Box Gasket	1
197A-200	Idle Adjusting Screw	1
198A-200	Idle Adjusting Spring	1
199A-200	Bowl Cover Gasket	1
200A-200	Throttle Shaft	1
201A-200	Drain Plug Gasket	1
202A-200	Screw and Lockwasher	1
203A-200	By-pass Tube Assembly	1
204A-200	Float	1
206A-200	Screw and Lockwasher	1
209A-200	Float Guide Gasket	1
212A-200	Screw and Lockwasher	1
54A-203	Float Bowl Cover Assembly	1
P-101	Drain Plug	1

ASSEMBLY AND SERVICE NOTES

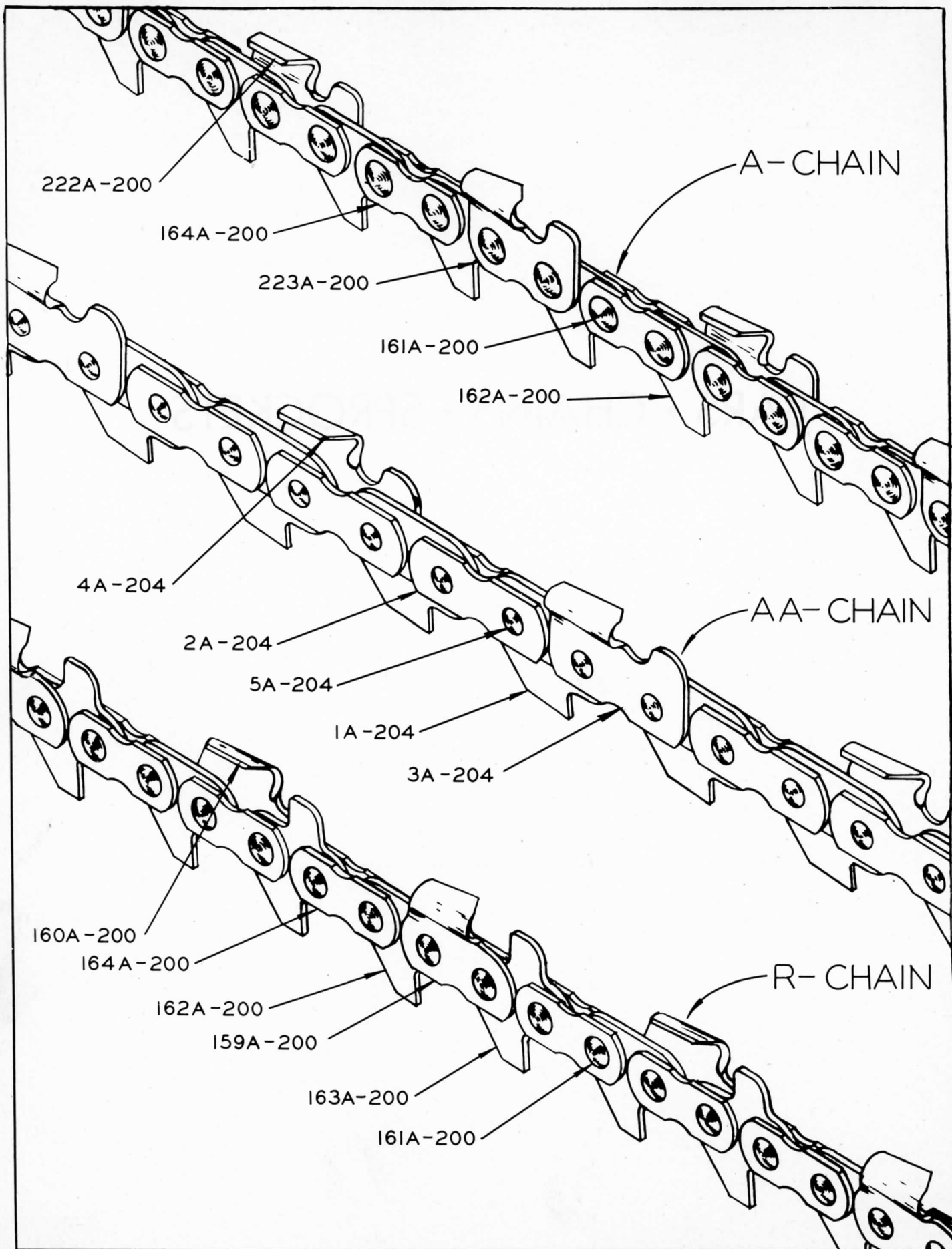
- A. The inlet needle seat and gasket set can be purchased under 58A-203.



MAGNETO COVER ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
75B-200

Part No.	Description	Number Req'd.
71B-200	Magneto Cover.....	1
76A-200	Grommet Plug.....	1
77A-200	Ring.....	1
78A-200	Felt Washer.....	1
101A-200	Switch Ground Plate.....	1
186A-200	Ignition Switch Assembly.....	1
187A-200	Switch Gasket.....	1

BARS • CHAINS • SPROCKETS



**TITAN SERIES 40 CHAIN SAW
BARS AND CHAINS**

The Following Bars Are Available

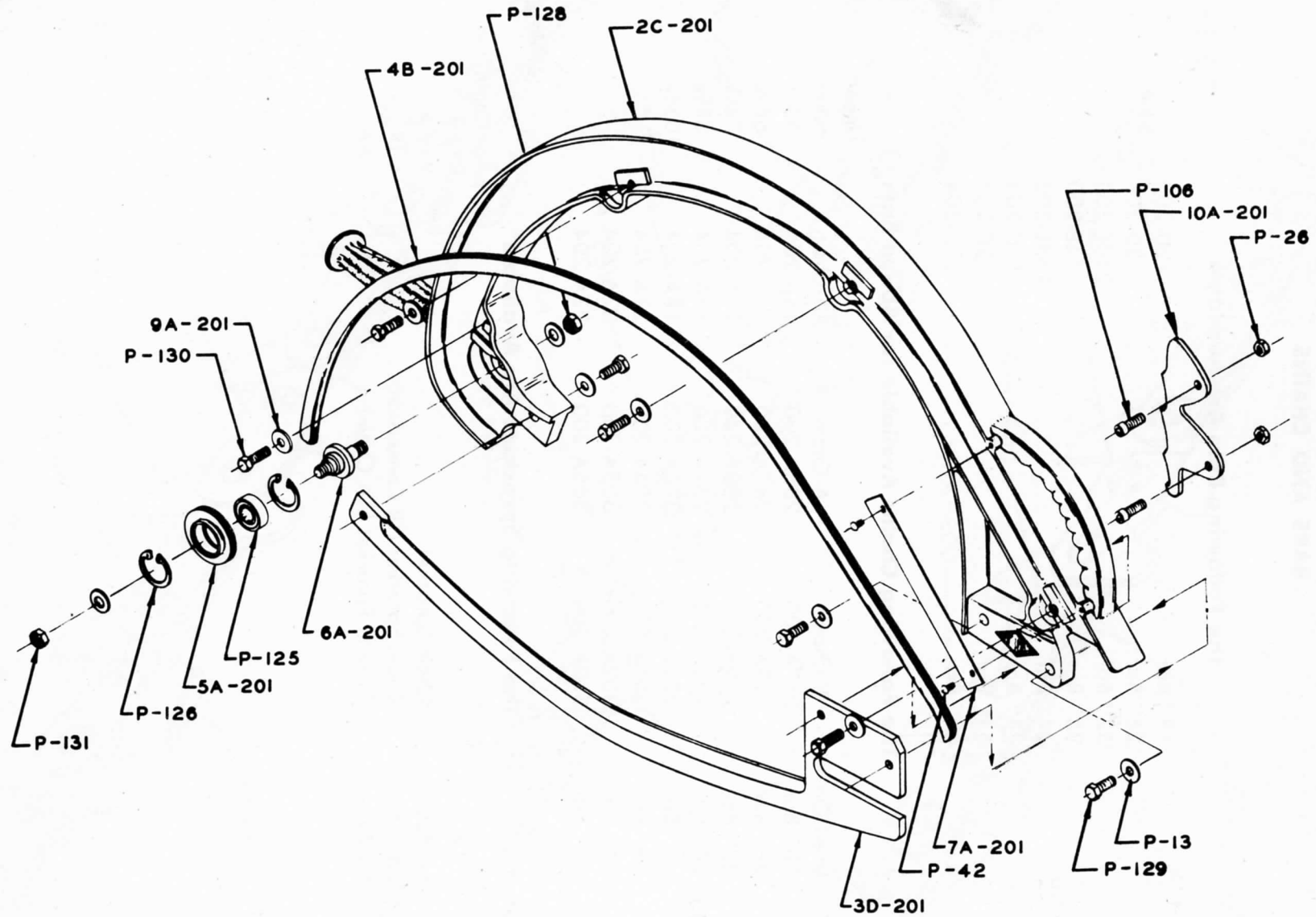
18" Bar	12D-200
26" Bar	13D-200
32" Bar	210E-200
36" Bar	14E-200
44" Bar	158E-200
48" Bar	10C-204
54" Bar	12C-204
60" Bar	13C-204

The Following Chains Available for Above Bars

Used On	R-Chain	A-Chain	AA-Chain	Lineal Inches
18" Bar	217A-200	286A-200	14A-204	50½
26" Bar	218A-200	287A-200	15A-204	66⅝
32" Bar	219A-200	288A-200	16A-204	78½
36" Bar	220A-200	289A-200	17A-204	88⅝
44" Bar	221A-200	290A-200	18A-204	103¾
48" Bar	301A-200	304A-200	21A-204	
54" Bar	302A-200	305A-200	22A-204	
60" Bar	303A-200	306A-200	23A-204	

The Following Sprockets Are Available

		Type of Chain Req'd.
7A-200	Chain Sprocket	R or A
272A-200	Chain Sprocket (TR Conversion)	TR
7A-204	6 Tooth Sprocket (AA Chain)	AA



**JUNIOR BOW SAW ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
1B-201**

Part No.	Description	Number Req'd.
2C-201	Bow Saw Frame	1
3D-201	Blade for Bow Saw	1
4B-201	Track for Bow Saw	1
5A-201	Idler for Bow Saw	1
6A-201	Idler Shaft, Bow Saw	1
7A-201	Guard Plt., Bow Saw	1
9A-201	Track Wsh.	4
10A-201	Rub Plate	1
P-13	Plain Wsh.	5
P-26	Hex Nut	2
P-42	Drive Screw	2
P-106	Soc. Hd. Cap Screw	2
P-125	Ball Bearing	1
P-126	Truarc Ring	2
P-128	Jam Nut	1
P-129	Hex Head Bolt	3
P-130	Hex Head Bolt	4
P-131	Jam Nut	1

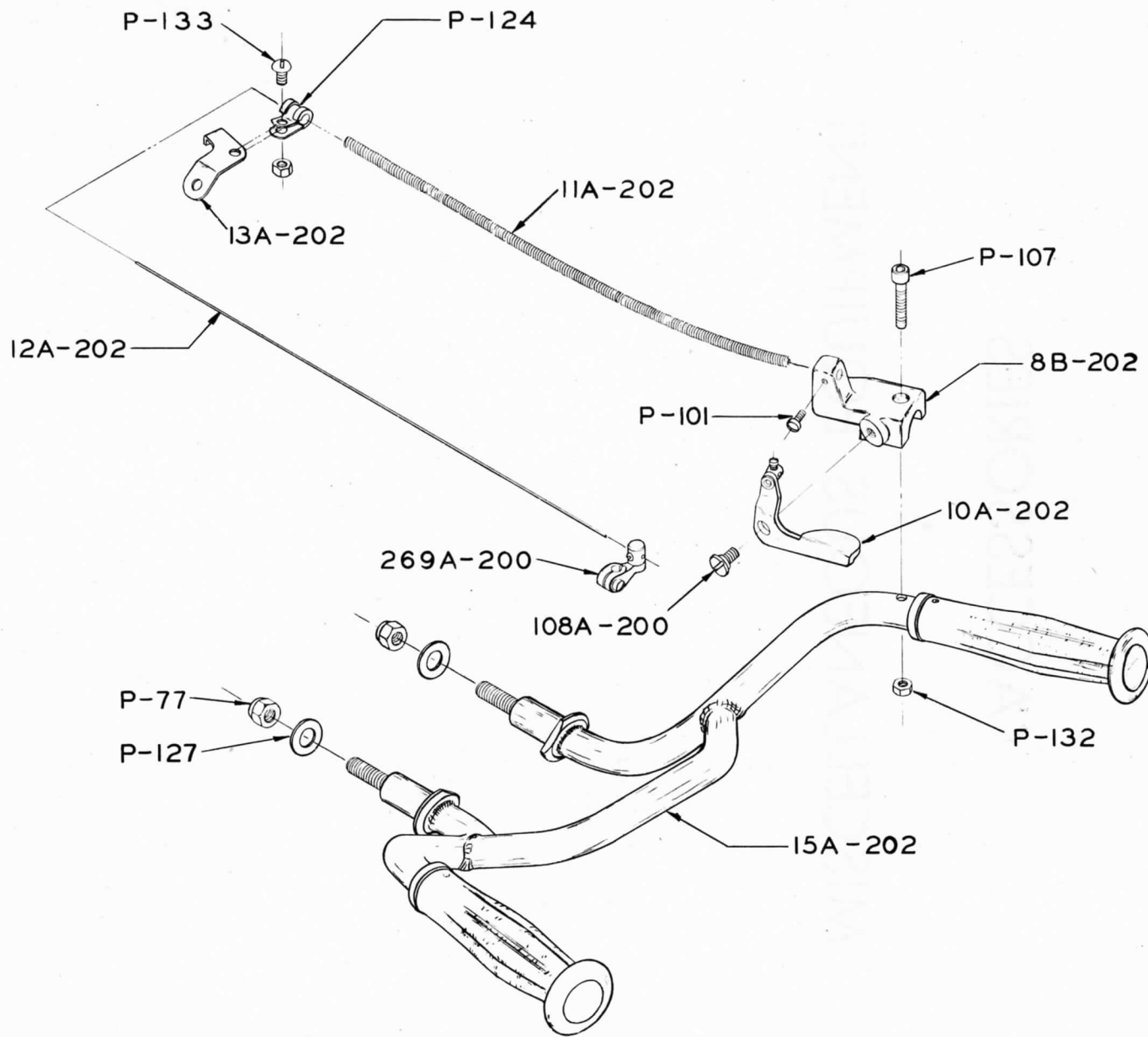
ASSEMBLY AND SERVICE NOTE

Transmission Assembly 61D-200 must be replaced by Transmission Assembly 284D-200 if the Bow Saw is used or Transmission Housing Casting 65D-200 must be replaced by Transmission Housing Casting 283D-200.

ACCESSORIES

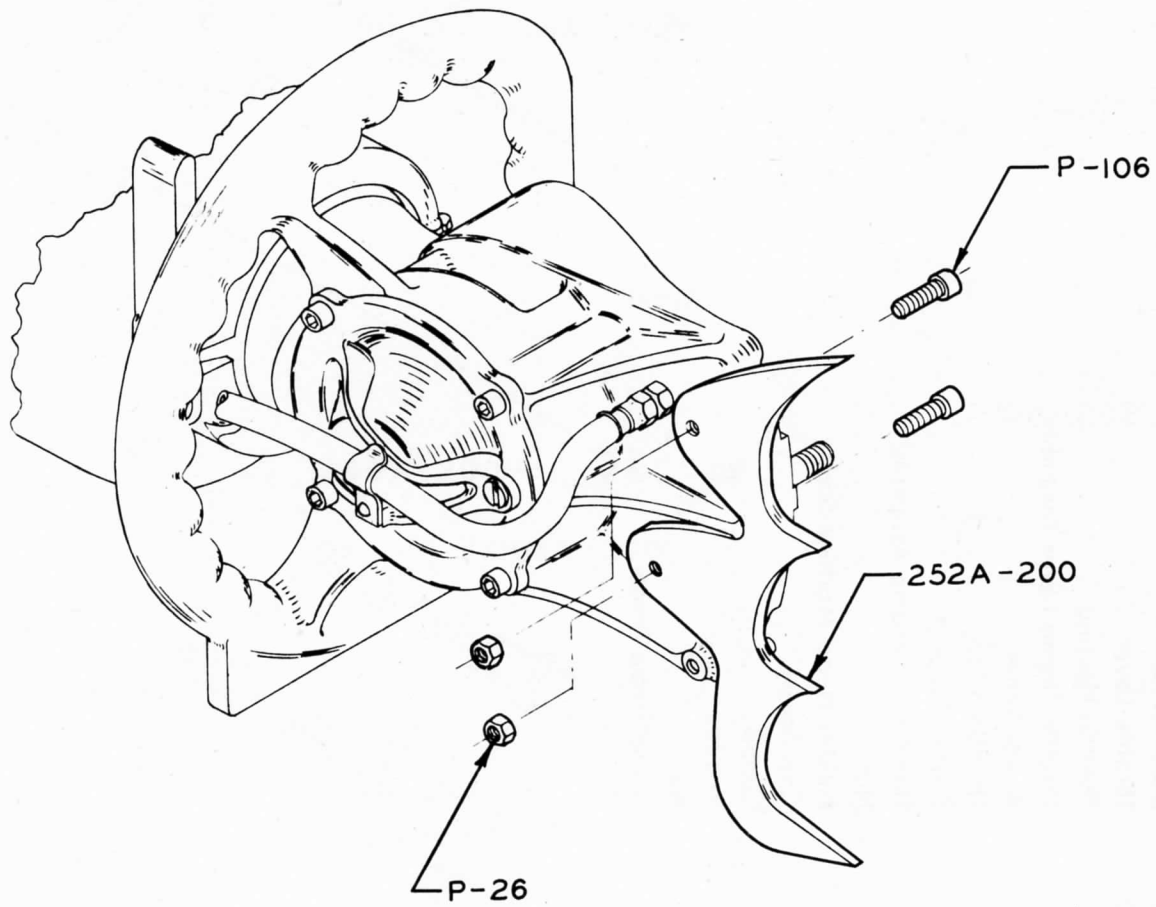
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MISCELLANEOUS EQUIPMENT



HANDLEBAR ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
1C-202

Part No.	Description	Number Req'd.
108A-200	Shoulder Screw	1
269A-200	Throttle Lever	1
8B-202	Throttle Housing	1
10A-202	Throttle Thumb Lever Assembly	1
11A-202	Armor Wire	1
12A-202	Throttle Wire	1
13A-202	Clamp Support	1
15A-202	Handle Bar Frame Assembly	1
P-77	Nut	2
P-101	Fillister Head Machine Screw	1
P-107	Cap Screw	1
P-124	Clamp	1
P-127	Washer	2
P-132	Nut	2
P-133	Round Head Screw	2



**TRANSMISSION HOOK PLATE ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
254A-200**

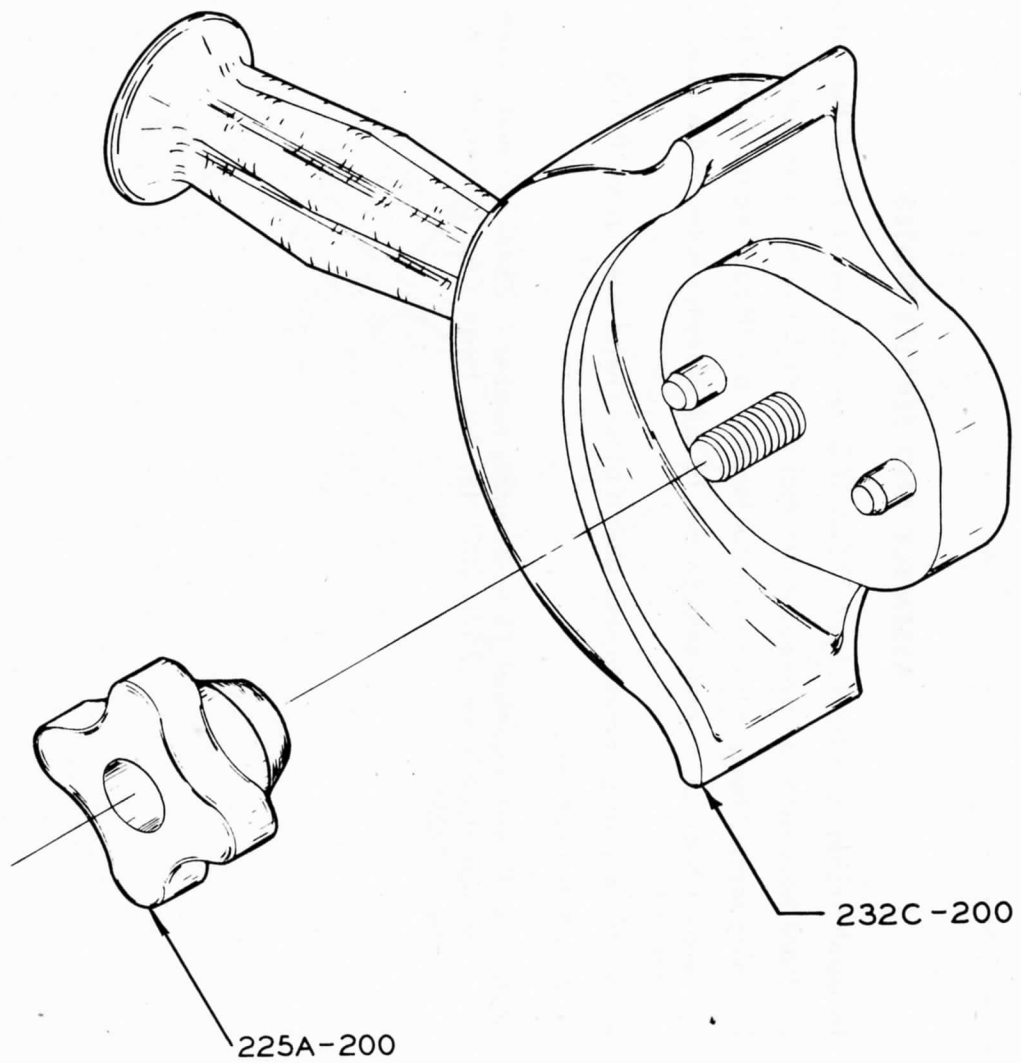
Part No.	Description	Number Req'd.
252A-200	Hook Plate	1
P-26	Nut	2
P-106	Screw	2

ASSEMBLY AND SERVICE NOTES

To install Transmission Hook Plate (252A-200) on Transmission follow the instructions below:

1. Place hook plate on transmission so that it seats firmly but does not ride on ribs.
2. Using tapped holes in hook plate for locators, drill through transmission with a 13 64 drill.
3. Remove hook plate and enlarge the 13 64 diameter holes in the transmission to 9 32 diameter.
4. Spotface casting radius to seat ahead of soc. head cap screws (P-106).
5. Assemble as shown.

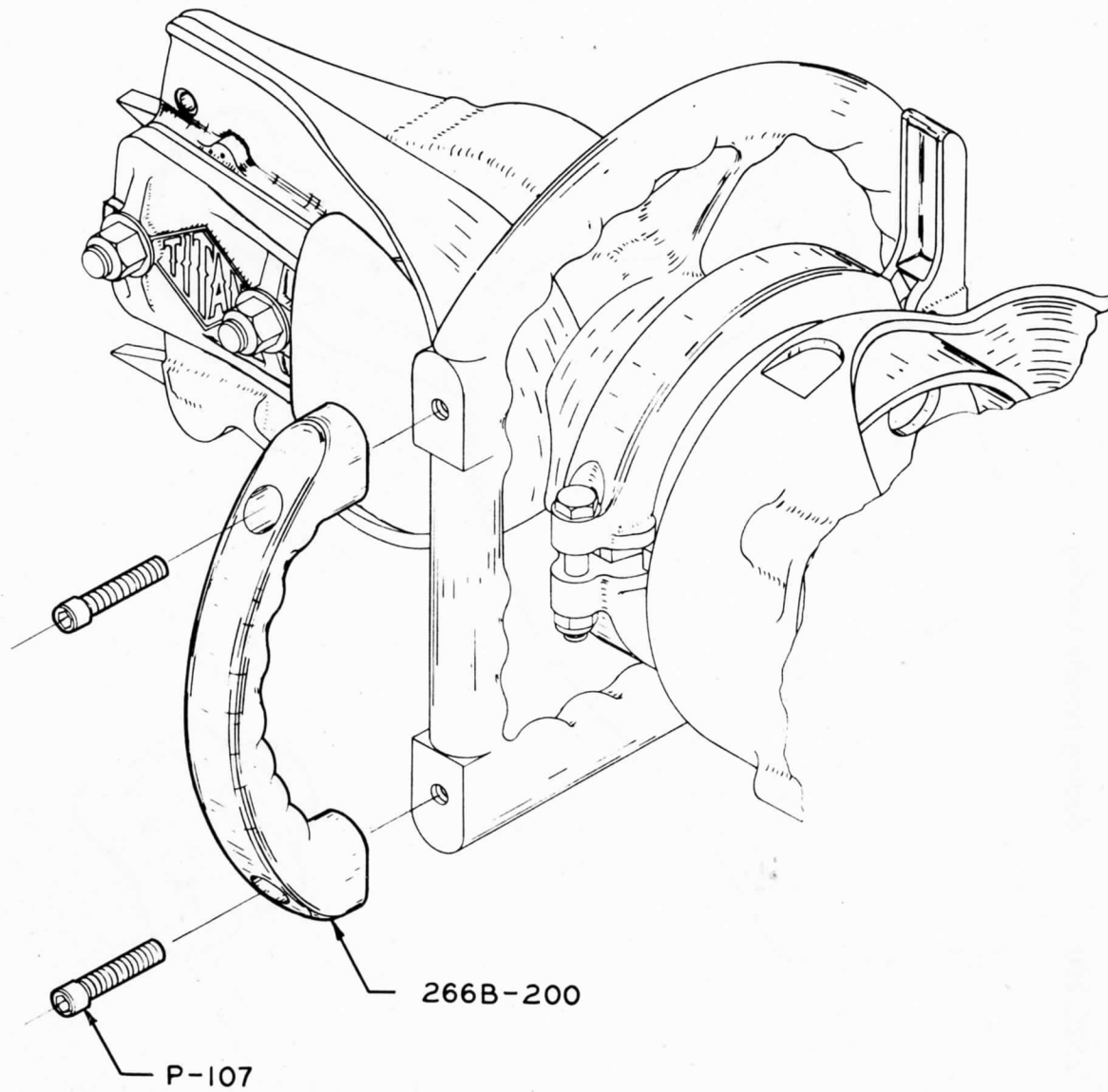
NOTE: The Transmission Hook Plate Assembly number is 254A-200 and consists of (1) Transmission Hook Plate (252A-200), (2) Soc. Head Cap Screws, (P-106) and (2) Hex Nuts, (P-26).



232C-200
225A-200

**MODEL 200 BUCKING HANDLE ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
224C-200**

Part No.	Description	Number Req'd.
225A-200	Hand Nut	1
232C-200	Bucking Handle Casting	1



**TRANSMISSION HANDLE ASSEMBLY
PARTS LIST AND GENERAL ASSEMBLY
298A-200**

Part No.	Description	Number Req'd.
266B-200	Transmission Handle	1
P-107	Cap Screw	2

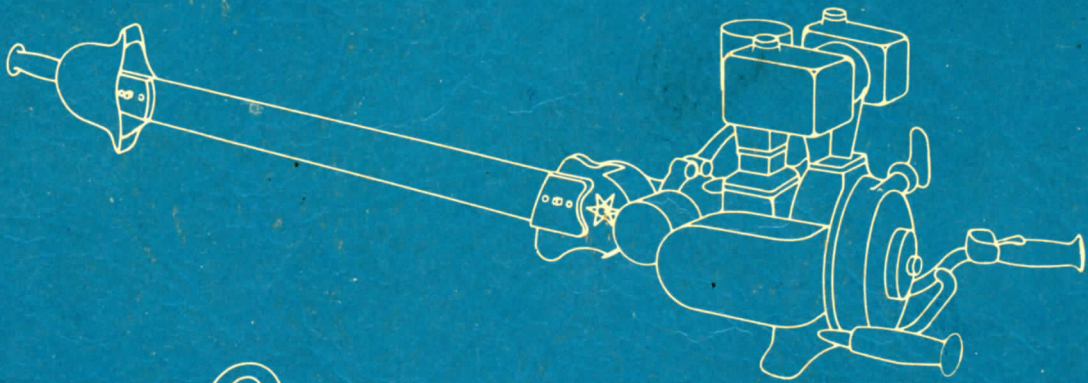
TITAN SERIES 40 CHAIN SAW TOOL KIT AND GASKET SET

The following tools are available in Kit Form (247A-200)

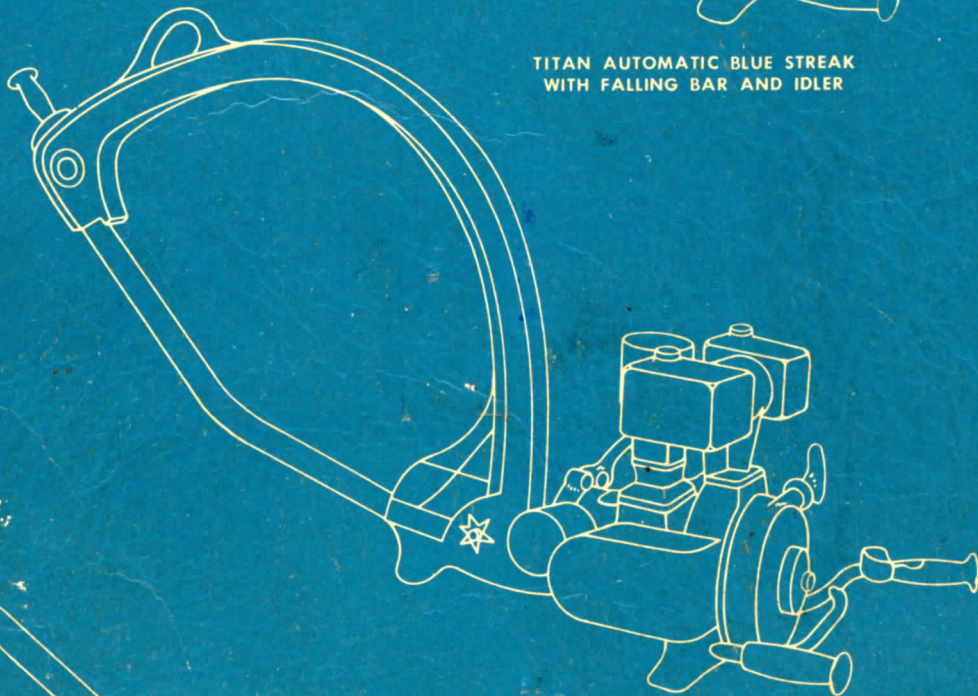
- | | |
|---------------------------------------------|----------------------------------|
| (1) 7-inch Screw Driver | (1) MA1A-10013 Wheel Puller |
| (1) 8-inch Crescent Wrench | (1) No. 1 Tru Arc Plier |
| (1) 3/16 across flats Long Arm Allen Wrench | (1) No. 2 Tru Arc Plier |
| (1) 1/8 across flats Long Arm Allen Wrench | (1) No. 3 Tru Arc Plier |
| (1) 5/32 across flats Allen Wrench | (1) Tube Titan Sealing Compound |
| (1) MT 1E-200 Oil Seal Tool | (1) MT 207A-200 Float Lever Tool |
| (1) 2MT 1E-200 Timing Tool | |

Gasket Set (265A-200) consists of:

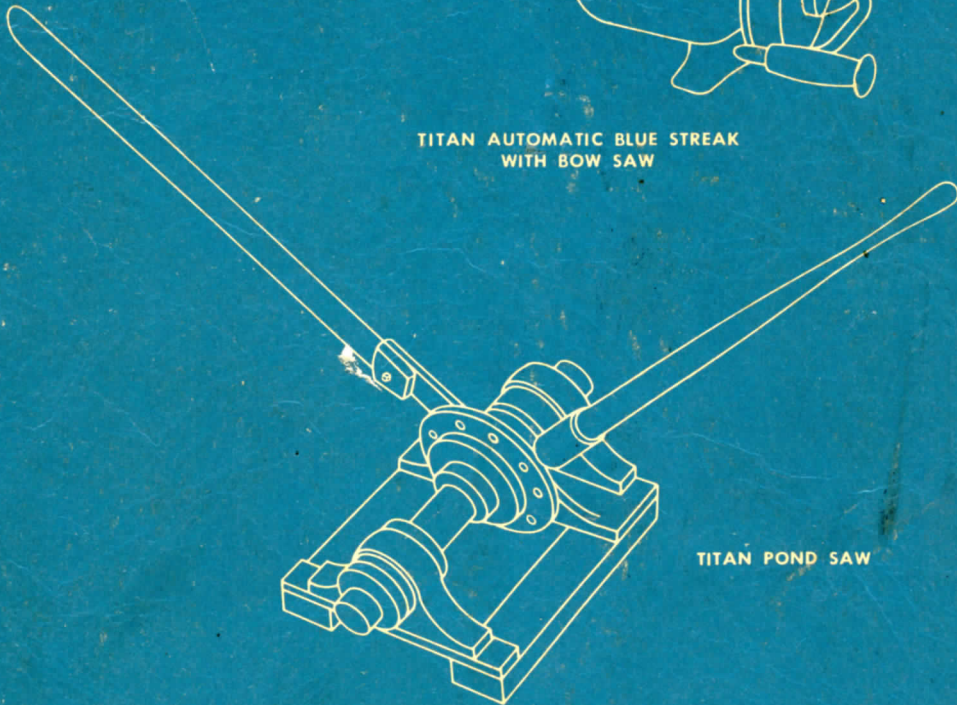
- | | |
|--------------------------|----------------------------|
| (1) Head Gasket | (1) Carburetor Base Gasket |
| (1) Cylinder Base Gasket | (3) Muffler Gasket |



TITAN AUTOMATIC BLUE STREAK
WITH FALLING BAR AND IDLER



TITAN AUTOMATIC BLUE STREAK
WITH BOW SAW



TITAN POND SAW

FOR FURTHER INFORMATION WRITE
TITAN CHAIN SAWS, INC.
SEATTLE 4, WASHINGTON