

# GRAVELY *Technical* BULLETIN

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BULLETIN NO. 1073  
DATE: May 18, 1964  
TO: ALL OUTLETS  
SUBJECT: WESTCHESTER TECHNICAL INFORMATION

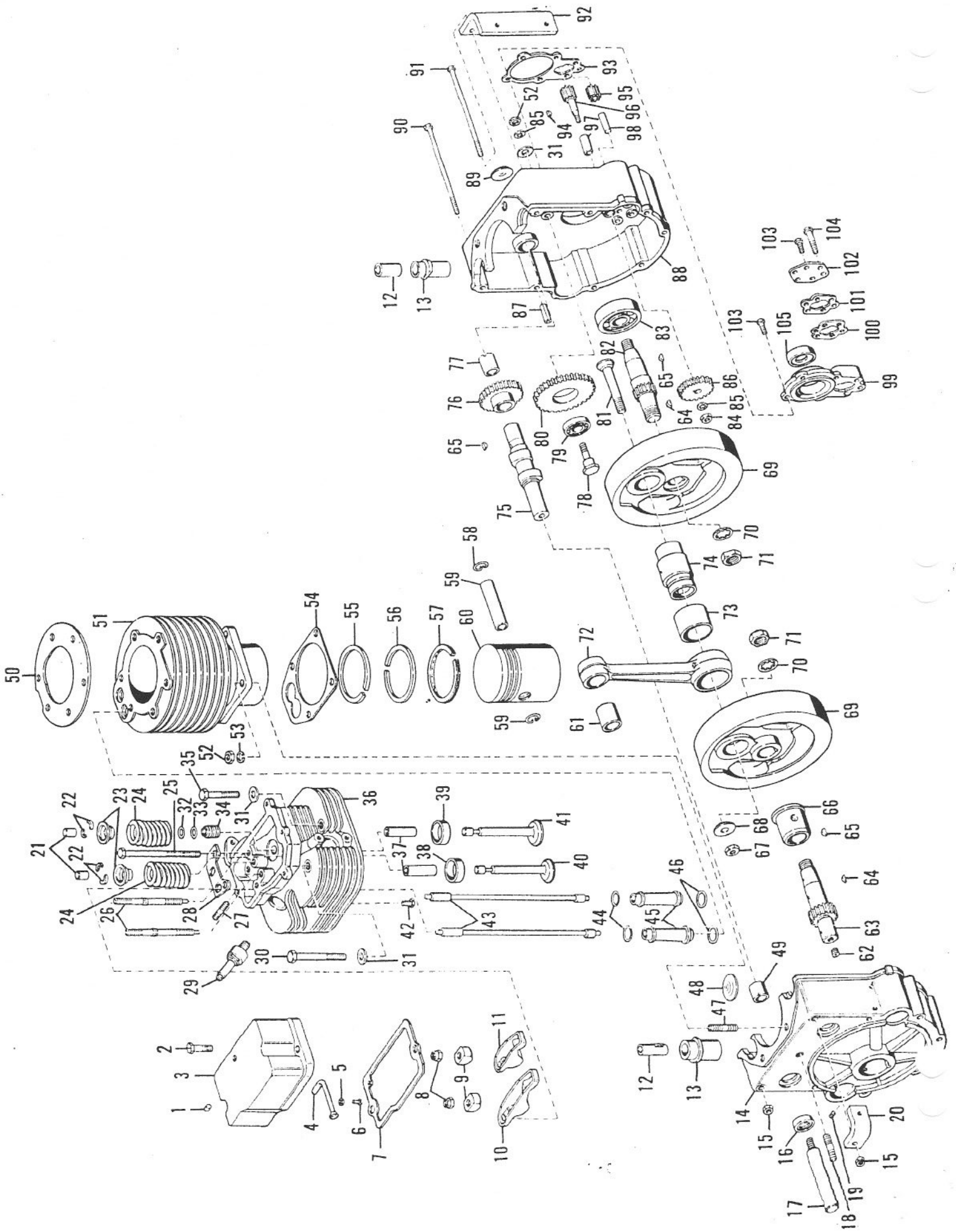
Attached you will find the following:

--Westchester Wiring Diagram. This is punched so that you can include this with the Westchester Technical Data booklet sent to you recently.

--Westchester Exploded Views. These are exploded views and parts lists for the Westchester Chassis, Steering and Engine assemblies, and the Westchester Fuel and Oil system. As soon as the remaining exploded views are provided by our supplier, we will send all dealers a bound set of all exploded views and parts lists for the Westchester.

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## WESTCHESTER ENGINE ASSEMBLY

Item No.	Part No.	Description
1	7200	Plug
2	5CH10C	Hex. Hd. cap screw
3	7197	Rocker box cover
4	7198	Oil line
5	7204	Flat washer
6	148S	Screw
7	7191	Rocker box gasket
8	7160	Hex locknut
9	7153	Rocker arm ball
10	7151	Exhaust rocker arm
11	7152	Intake rocker arm
12	7157	Tappet
13	6958	Valve plunger guide
14	6976	Inner crankcase
15	252N	Reg. hex. nut
16	L412	Crankshaft oil seal
17	L810A	Magneto shaft extension
18	L303	Cylinder stud
19	803A	Allen hd. set screw
20	7377	Mount plate front support
21	7150	Valve stem cap
22	7182	Valve spring seat lock
23	7183	Valve spring ret. ring
24	7173	Valve spring
25	6CH38C	Hex. hd. cap screw
26	7181	Rocker arm stud
27	7180	Carb. stud
28	7154	Push rod guide
29	7184	Spark plug
30	195S	Hex hd cap screw
31	L821	Hood spacer washer
32	7178	Retaining ring
33	7179	Retaining ring
34	7177	Valve stem oil seal
35	6CH16C	Hex hd. cap screw
36	7167	Cylinder head
37	7168	Valve guide
38	7170	Exhaust valve insert seat
39	7169	Intake valve insert seat
40	7172	Exhaust valve
41	7171	Intake valve
42	SA150	Connector assembly
43	SA149	Push rod assembly
44	7158	O Ring seal
45	6956	Push rod shield

Weschester Engine Assembly - page 2

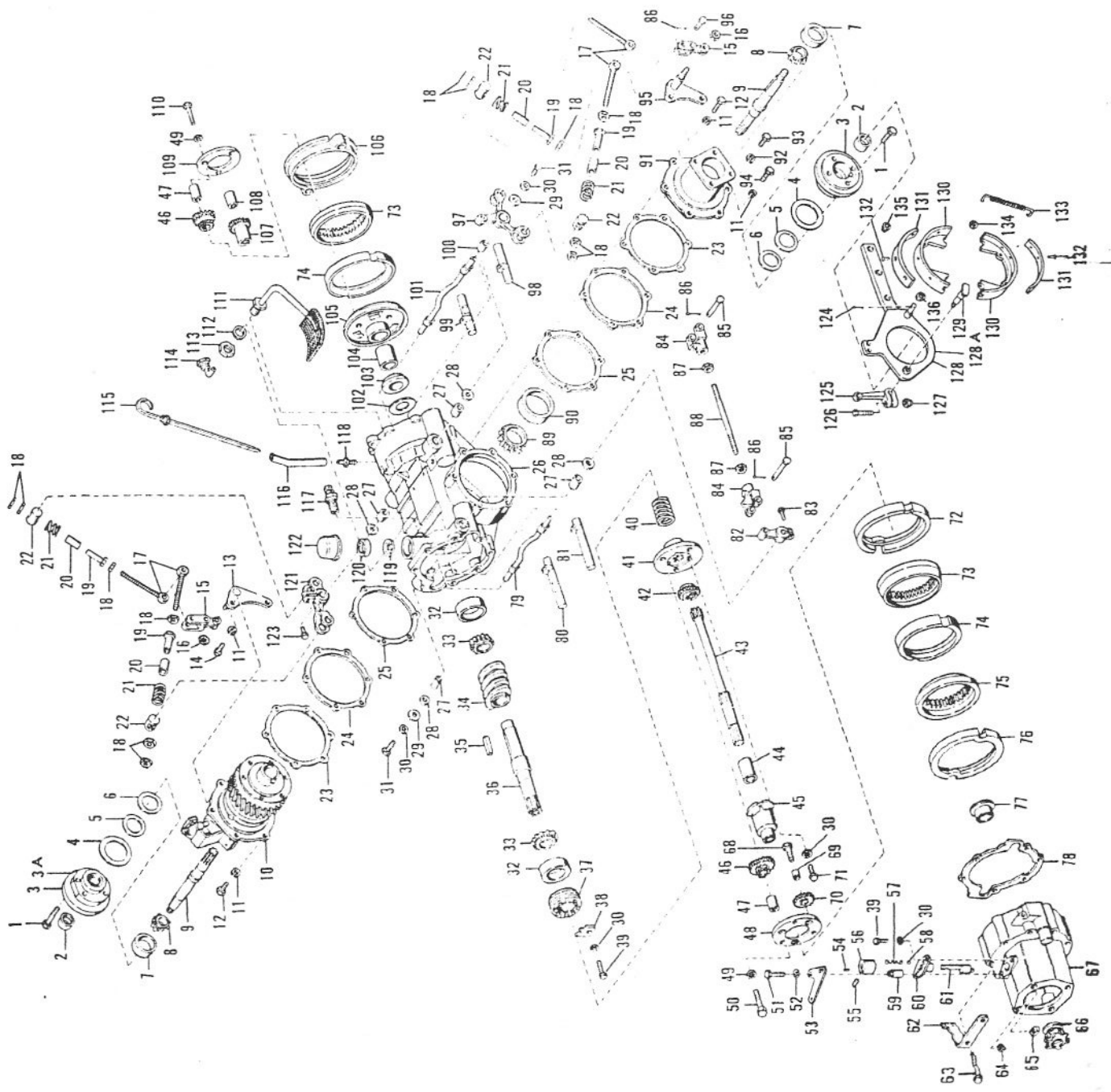
Item No.	Part No.	Description
46	7159	O ring seal
47	L304	Stud
48	7186	Expansion plug
49	L406-1	Crankshaft bushing
50	7155	Cylinder head gasket
51	6960	G. O. H. engine cylinder
52	206N	Nut
53	306W	Washer
54	6955	Cylinder to crankcase gasket
55	LH548	Chrome compression ring
56	LH547	Compression ring
57	LH546C	Oil ring
58	LH545	Piston pin lock
59	LH544	Wrist pin
60	LH543	Piston
61	L-306A	Rod bushing
62	801A	Set screw
63	L109	Drive pinion shaft
64	514K	No. 9 Woodruff key
65	503K	Woodruff key
66	L117	Drive pinion bearing
67	210N	Hex. nut
68	L107	Spreader washer
69	L104	Flywheel
70	L113	Flywheel locknut
71	L112	Flywheel nut
72	L863	Connecting rod
73	L306B	Rod bushing
74	L105	Crank pin
75	6959	Camshaft
76	L413	Camshaft gear
77	L426	Camshaft bushing
78	L417	Idle gear bearing stud
79	L416	Idler gear bearing
80	L415	Idle gear
81	L106	Spreader bolt
82	L110	Timing pinion shaft
83	L115	Timing pinion bearing
84	220N	Light semi fin. hex. jam nut
85	305W	Lock washer (shakeproof)
86	L419A	Oil pump drive gear
87	L120	Crankcase dowel
88	6975	Outer crank case
89	L414	Expansion plug
90	L116	Hex. hd. cap screw
91	L414	5CH48C Hex. hd. cap screw

Weschester Engine Assembly - page 3

Item No.	Part No.	Description
92	7376	Mount plate rear support
93	L125	Bearing and pump cap gasket
94	507K	Woodruff key
95	L854	Oil pump idler gear
96	L853	Oil pump master gear
97	L420B	Oil pump bushing'
98	L855	Idler gear stud
99	L850	Bearing and pump body
100	L852	Pump cap gasket
101	L852A	Pump cover shim
102	L851	Pump cap
103	165S	Hex head cap screw
104	185S	Hex. hd. cap screw
105	L126A	Bearing cap seal

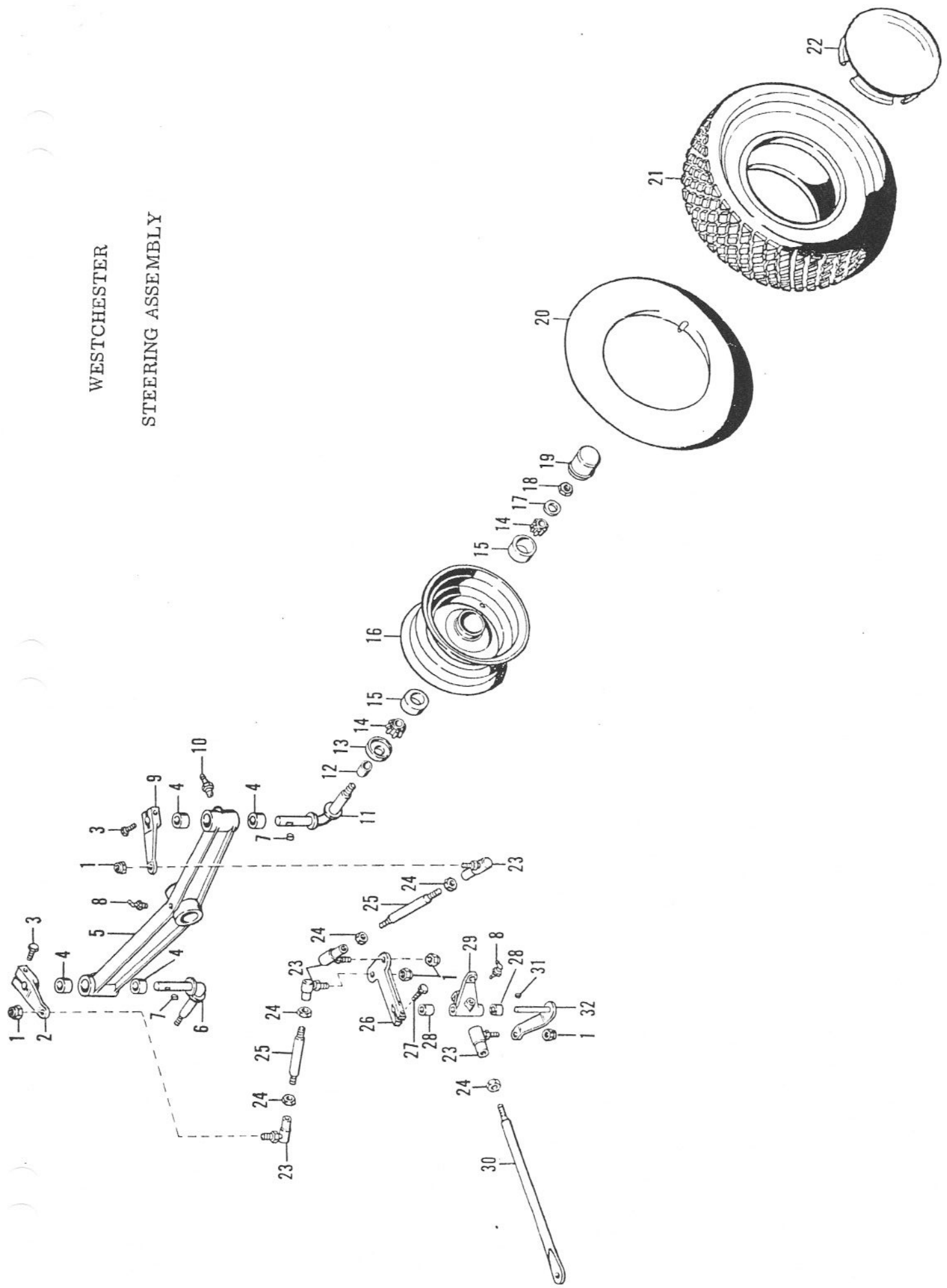
# WESTCHESTER CHASSIS ASSEMBLY

Item No.	Part No.	Description
1	5CH20C	Tuff tite hex. hd. cap screw
2	L208	Bearing cap oil seal
3	7115RH	Bearing cap
3A	7117LH	Bearing cap
4	7103	Axel bearing cap gasket
5	7106	Shim
6	7107	Shim
7	RB110R	Roller bearing race
8	RB110C	Roller bearing cone
9	L611B	Axle
10	SA141	2-speed Diff. assembly
11	308W	Spring lockwasher
12	L22S	Hex hd. cap screw
13	7058	Right clutch link pivot bracket
14	L52S	Hex hd. cap screw
15	7060	Clutch link
16	NTE06C	Thin elastic stop nut
17	7063	Clutch Rod
18	215N	Light hex. jam nut
19	7065	Clutch adjusting nut
20	7064	Spring tube
21	7062	Clutch spring
22	7061	Clutch rod pivot
23	L220A	Shim
24	L220B	Shim
25	L220G	Gasket
26	L201	Chassis casting
27	L713	Actuating shaft bushing
28	L735	Thrust washer
29	L736	Oil seal washer
30	303W	Shakeproof lockwasher
31	L65S	Hex. hd. cap screw
32	L522R	Roller bearing race
33	L522C	Roller bearing cone
34	L601	Worm
35	L608	Worm key
36	L521	Worm shaft
37	L507	Bearing adjustment nut
38	L523	Adjustment nut lock
39	L64S	Hex hd. cap screw
40	L547	Pin plate spacer, spring
41	L505	Front pin plate
42	L510	Sun pinion
43	L543	Pinion shaft
44	L546	Pinion shaft bearing



Item No.	Part No.	Description	Item No.	Part No.	Description
45	7237	Pin plate quill	89	RB111C	Bearing cone
46	L513	Orbit gear	90	RB111R	Bearing race
47	L514	Orbit gear pin	91	L203E	Axle housing
48	L539	Front pin spacer	92	L213	Washer
49	305W	Shakeproof lockwasher	93	L23S	Hex. hd. cap screw
50	L516R	Spacer bolt front pin axle	94	L22S	Hex. hd. cap screw
51	166S	Hex. hd. cap screw	95	7057	Left clutch link pivot bracket
52	401W	Flat washer	96	7059	Clevis pin
53	7043	Att. throwout clutch shifter arm	97	7068	Forward, reverse transfer lever
54	L124	Shifter dowel	98	711L	Clutch slide rod
55	801A	Allen hd. set screw	99	711R	Clutch slide rod
56	L127	Shifter body	100	7018	For. rev. transfer lever bushing
57	L815D	Spring	101	7076	Clutch actuating shaft
58	L809	Locator ball	102	L211	Rear thrust plate shim
59	L128	Spacer	103	L519	Rear thrust plate
60	L734	Shipper shaft guide	104	L535	Rear pin plate bushing
61	L545	Shipper shaft	105	L506	Rear pin plate
62	7045	Att. throwout cable bracket	106	L524	Rear spacer
63	L207	Advance casting bolt	107	L511	Sun gear
64	242N	Elastic stop nut	108	L534	Sun gear bushing
65	L226	Dog block	109	L515	Pin spacer
66	L544	Clutch dog	110	L516L	Spacer bolt rear pin plate
67	L202D	Advance casting	111	L868	Oil strainer
68	L542	Reverse idler bolt	112	L823A	Gasket
69	L541	Reverse idler bushing	113	218N	Light hex. jam nut
70	L540	Reverse idler	114	L814F	Elbow
71	191S	Hex hd. cap screw	115	SA191	Dip stick assembly
72	L508	Gear cup	116	7128	Dip stick guide
73	L501	Internal gear	117	SA136	Relief valve assembly
74	L517	Clutch cup	118	L885	Dip stick fitting
75	7235	Reverse gear cone	119	L864	Filler neck baffle
76	7236	Gear cup	120	L211	Chassis oil filler neck
77	SA135	Front thrust plate	121	7066	High low clutch lever
78	L209	Chassis front gasket	122	L212	Chassis oil filter cap breather
79	L712	Clutch actuating shaft	123	106S	Hex. hd. cap screw
80	L710R	Clutch slide rod	124	3CP8	Cotter pin
81	L710L	Clutch slide rod	125	7111	Brake cam lever
82	7069	Forward reverse clutch lever	126	5CC12C	Hex. hd. cap screw
83	106S	Hex hd. cap screw	127	252N	Cone lock nut (full)
84	7071	Transfer link clevis	128	7112	Left pivot ring weldment
85	7072	Clevis pin	128A	7113	Right Pivot ring weldment
86	609C	Cotter key	129	7114	Brake cam
87	3312	Light hex. nut	130	SA159	Brake shoe
88	7070	Transfer rod	131	7119	Brake lining
			132	7218	Rivet
			133	7102	Brake Shoe spring
			134	410W	Flat washer
			135	6911	Lord Mount

WESTCHESTER  
STEERING ASSEMBLY



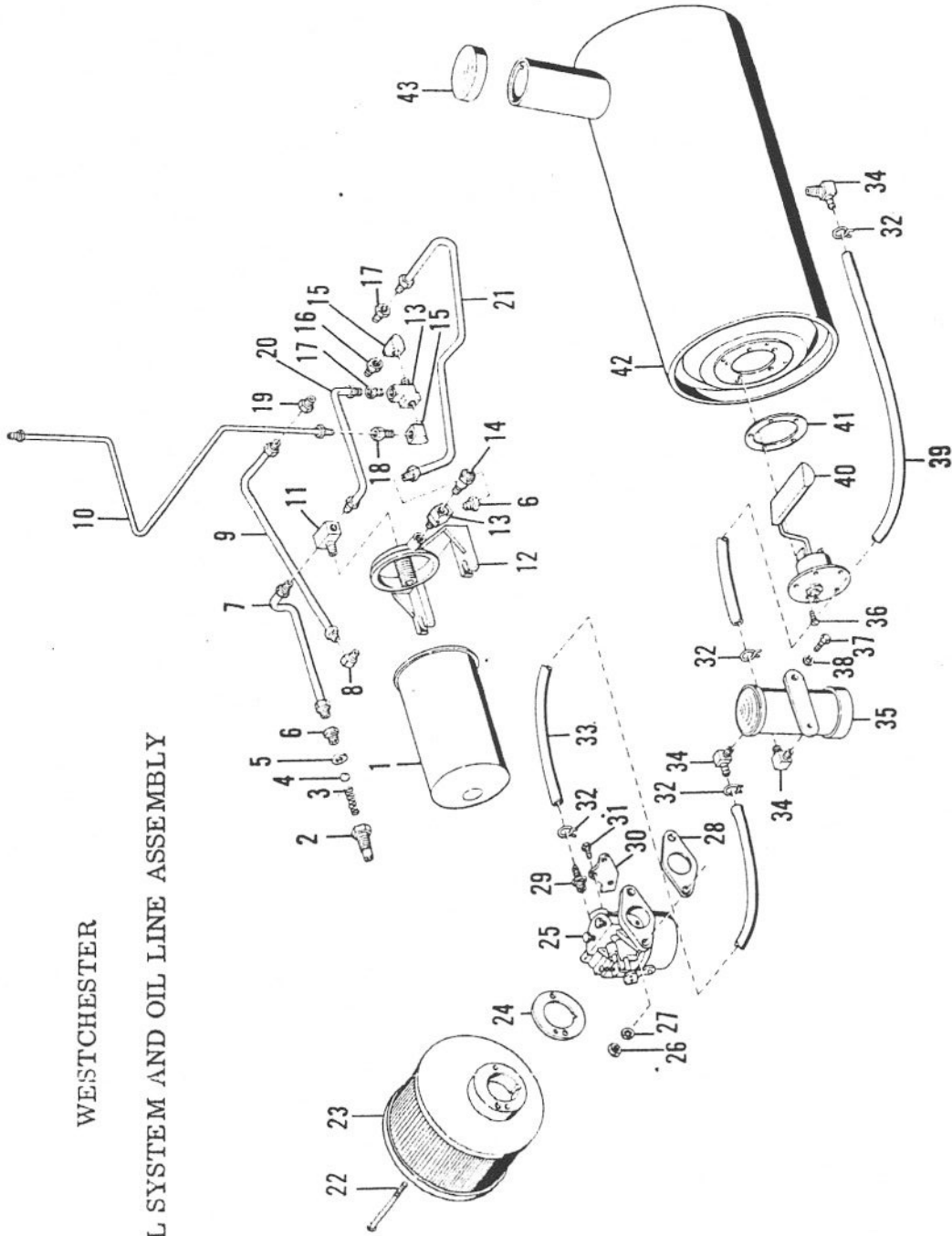


## STEERING ASSEMBLY

Item No.	Part No.	Description	No. Req'D
1	250N	Conelock, nut	5
2	7008	Right cross drag link arm	1
3	154S	Hex hd cap screw	2
4	6999	King pin bushing	4
5	7000	Rear axle	1
6	7001	Right king pin	1
7	503K	Woodruff key #6	2
8	902G	90° Grease fitting	2
9	7009	Left cross dragline arm	1
10	901-G	Grease fitting	2
11	7002	Left king pin	1
12	7004	Spacer	2
13	6963	Felt seal	2
14	RB124C	Bearing	4
15	RB124R	Bearing	4
16	6964	Wheel rim	2
17	417W	Flat washer	2
18	249N	Conlock nut	2
19	6965	P. S. cap	2
20	L616TU	Tube	2
21	L616I	Tire	2
22	6961	Hub cap	2
23	6962	Ball joint	5
24	220-N	Light semi/finish hex. jam nut	5
25	7007	Cross link	2
26	7010	Cross link control arm	1
27	106S	Hex hd cap screw	1
28	6998	Bell crank bushing	2
29	7011	Bell crank bearing mount	1
30	7005	Drag link	1
31	511K	Woodruff Key #5	1
32	7006	Drag link bell crank	1

WESTCHESTER

FUEL SYSTEM AND OIL LINE ASSEMBLY



PARTS LIST FOR FUEL SYSTEM & OIL LINE ASSEMBLY  
for Westchester

Item No.	Part No.	Description
1	L857	Oil filter
2	L856	Relief valve body
3	L815D	Relief valve spring
4	L865q	Valve ball
5	L821	Hood spacer washer
6	7370	Male connector
7	SA189	Oil line filter to relief valve
8	7374	Male elbow
9	SA186	Oil line strainer to pump
10	SA190	Oil line cylinder to head
11	7375	Tee
12	L858	Oil filter bracket
13	L867	Oil gauge adaptor
14	7368	Low oil pressure switch
15	7373	Street elbow
16	7372	Adaptor
17	7370	Male connector
18	7369	Male connector
19	7371	Male connector
20	SA187	Oil line filter to engine
21	SA188	Oil line pipe to filter
22	10RS60F	Machine screw, r. h.
23	7132	Air cleaner
24	7199	Carburetor air horn gasket
25	7174	Carburetor
26	215N	Nut
27	304W	Shakeproof washer
28	7175	Carburetor flange gasket
29	L842	Gas line connector
30	7176	Manual choke bkt.
31	203S	Self tapping screw
32	7216	Fuel hose clamp
33	7219	Fuel pump to carb hose
34	L843	Elbow
35	SA195	Electric fuel pump
36	10ST6C	Truss hd. machine screw
37	4CC3C	Hex. hd. cap screw
38	WL4	Spring Lockwasher
39	7215	Fuel tank to fuel pump hose
40	7273	Rheostat
41	6932	Rheostat gasket
42	6934	Fuel tank
43	7289	Cap

WESTCHESTER  
OHA ENGINE SPECIFICATIONS

Year first produced-----	1964
Number of cylinders-----	1
How cast-----	Single
How set-----	Vertical
Cylinder sleeve-----	None
Bore and stroke-----	3 $\frac{1}{4}$ x 3 $\frac{1}{2}$
Piston displacement, Cu.In.-----	29.03
Compression Ratio-----	6.3:1
Spark Plug size-----	14MM
Spark Plug-----	Champion H-8
Number Compression Rings per Piston-----	2
Number Oil Control Rings per Piston-----	1
Oil Ring Groove width-----	3/16
Valve arrangement-----	OHV
Inlet Valve Opening Diameter, In.-----	1 15/32
Wrist Pin Diameter-----	7/8
Cam Shaft Diameter-----	3/4
Number of Crankshaft Bearings, Plain *-----	1
Crankshaft Bearing Diameter, In.-----	1
Crankshaft Bearing Length (Total)-----	1 7/8
Connecting Rod Bearing Diameter-----	1 1/2
Connecting Rod Bearing Length-----	1 1/4
Carburetor Size, Verituri Diameter, In.-----	7/8
Cooling Method-----	Air
Fuel Recommended-----	Gasoline
Make of Governor-----	Hoof Products
Type of Governor-----	Centrifugal
Governor Speed, no load-----	3400 RPM
RPM of Engine at 1000 fpm Piston speed-----	1640
Largest size advisable to rebore Cylinder Block-----	3 9/32
Clearance between Piston and Cylinder-----	.005
Note: Slide Piston through Cylinder over .005 thick strip of steel $\frac{1}{2}$ inch wide at right angles to Piston Pin without forcing.	
Recommended Ring Gap-----	.012/.015
Valve Clearances, Cold settings:	
Intake-----	.015
Exhaust-----	.020
Spark Plug Gap-----	.035
Breaker Point Gap-----	.020

\*Crankshaft is supported on one plain Bearing and one Ball Bearing.

WESTCHESTER WIRING DIAGRAM, DISTRIBUTOR IGNITION  
(SA-183)

