

Parts & Service Manual

E2-09K401

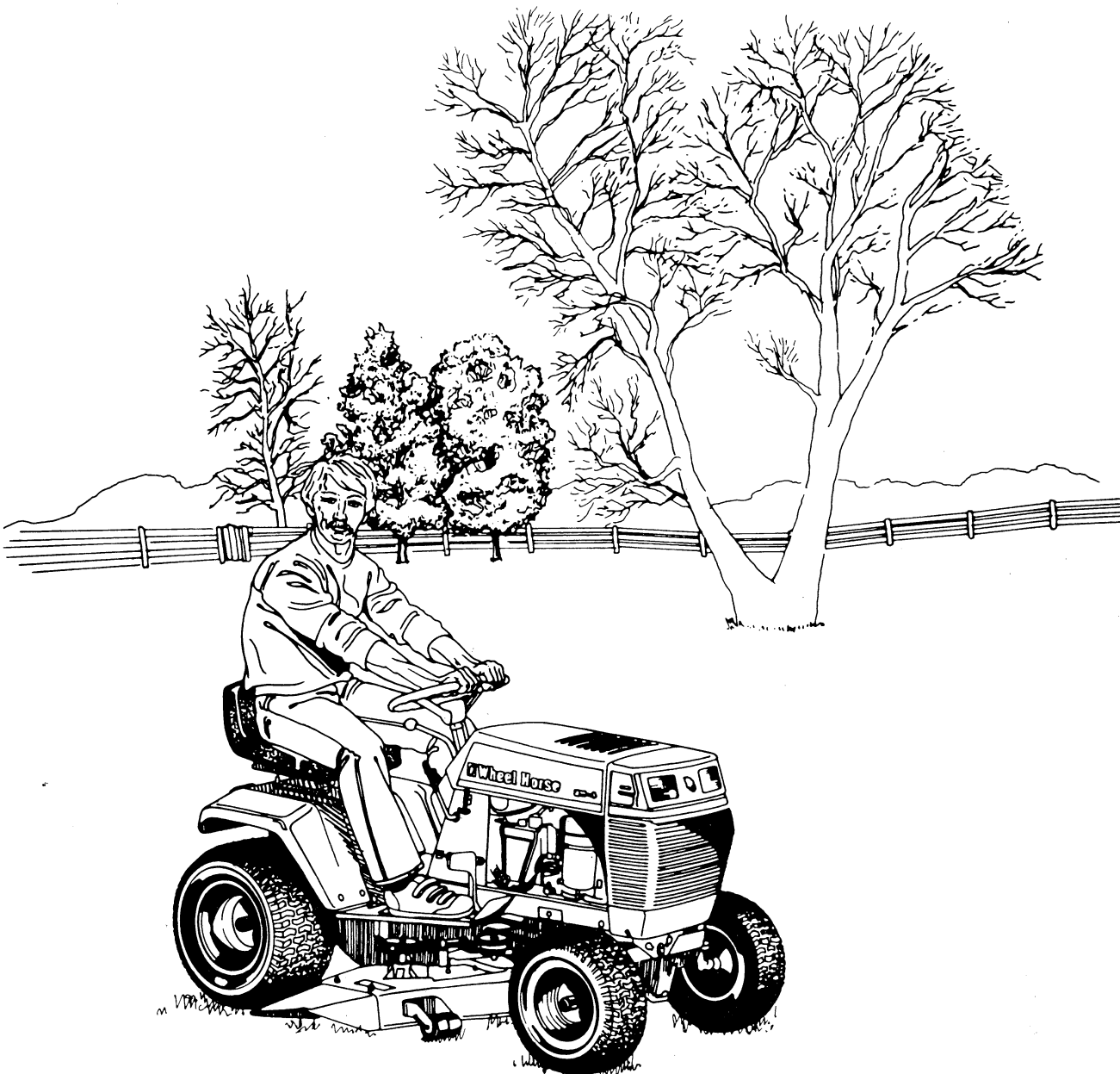
210-4

4-speed

E2-12K501

212-5

5-speed



Wheel Horse

WHEEL HORSE PARTS MANUAL

INTRODUCTION PAGE

1. How to use this parts manual

- 1.1 This parts manual is divided into major sections arranged in the sequence as outlined on the following page. Major sections are subdivided into smaller groups of parts, each with its own illustration and illustration reference numbers.
- 1.2 Illustrated items are numerically keyed to the parts listing on the facing page. Illustrations are repeated when the parts list is too long for one page. Figure numbers are located at the bottom of each illustration and also at the beginning of each description column. Item numbers are numerically keyed to their respective illustrations.
- 1.3 A numerical index is located at the end of the manual.
- 1.4 When an (X) appears in the quantity (Qty) column use only if applicable or as required to meet tolerances.

2. To locate parts

- 2.1 When function use or location is known:
Refer to the List of Illustrations to locate the proper illustration.
- 2.2 When part number is known:
Refer to the Numerical Index.

3. Service information

- 3.1 Special notes recorded on illustrations:
Refer to available owner & repair manuals and service bulletins for detailed information.
- 3.2 Standard torque values for fasteners:
Refer to Section 18 - Torque Specifications.
- 3.3 Paint:
Refer to Section 18 - Paint.

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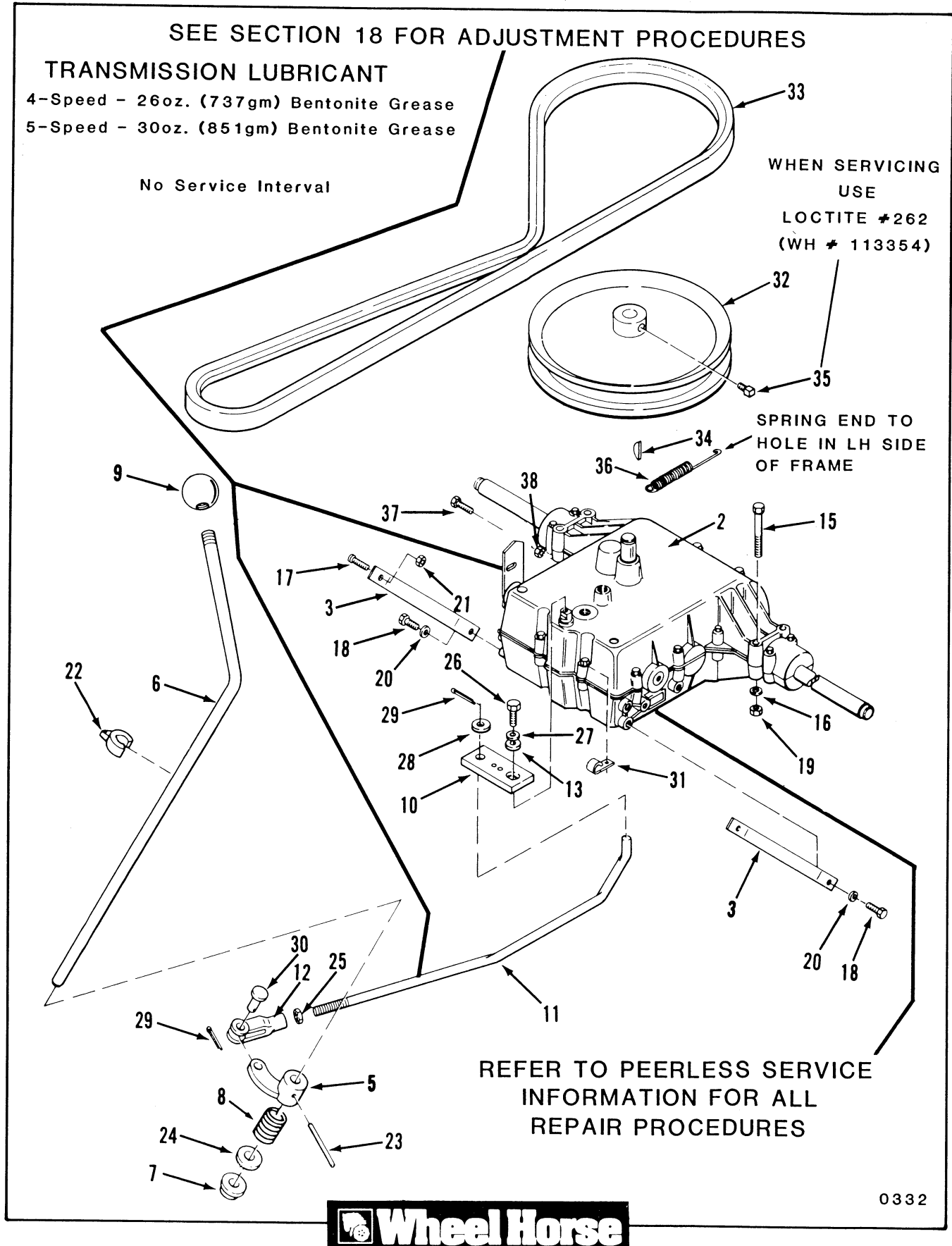


Figure 3-1 4 & 5 - Speed Transmission

SECTION 3 - TRANSMISSION 3

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 3-1			
4 & 5 - SPEED TRANSMISSION			
2	112133*	Trans. - 4-Spd.(Peerless Model 900-029) 210-4.....	1
	112299*	Trans. - 5-Spd.(Peerless Model 920-009) 212-5.....	1-
3	112982	Torque Strap (1 used on 210-4).....	2
	111429	Torque Strap 210-4 Only.....	1
5	111430	Arm.....	1
6	111431	Shaft.....	1
7	5666	Nylon Bushing.....	1
8	111432	Spring.....	1
9	112983	Knob.....	1
10	111433	Transmission Arm.....	1
11	111672	Rod.....	1
12	8812	Yoke.....	1
13	104869	Special Washer.....	1
15	908025	Hex Hd Cap Screw 5/16-18 x 2-1/2.....	4
16	920008	Washer 5/16 SAE.....	6
17	900036	Carriage Bolt 5/16-18 x 5/8.....	2
18	926720	S.W. Form Screw 5/16-18 x 3/4.....	2
19	915662	E.S. Hex Nut 5/16-18.....	4
20	920082	Lockwasher 5/16.....	2
21	915112	Eslok Nut 5/16-18.....	2
22	113025	Pointer.....	1
23	933273	Spirol Pin 7/32 x-2 1/2.....	1
24	3765	Shim Washer .035.....	X
	1278	Shim Washer .050.....	X
25	915084	Jam Nut.....	1
26	908153	Hex Hd Cap Screw 1/4-28 x 7/8.....	1
27	920081	Lockwasher 1/4.....	1
29	920268	Washer 11/32 SAE.....	1
29	932008	Cotter Pin 3/4 x 3/32.....	2
30	932121	Clevis Pin.....	1
31	111357	J-Clip.....	1
32	111532	Transmission Pulley.....	1
33	111435	Transmission Drive Belt (91.7").....	1
34	937225	Hi Pro Key #9 3/16 x 3/4.....	1
35	909540	Sq Hd Set Screw.....	2
36	110769	Brake Return Spring (4.9").....	1
37	908019	Hex Bolt 5/16-18 x 1 Brake Stop.....	1
38	915112	Eslok Hex Nut 5/16-18.....	1

*Order Replacement Parts or Complete Assembly
Through Manufacturer's Distribution System,
Using Model/Spec. Number Shown.

WHEEL HORSE Part Number is Listed for Cross-
Reference Purpose only; Item is Not Available
Through WHEEL HORSE.

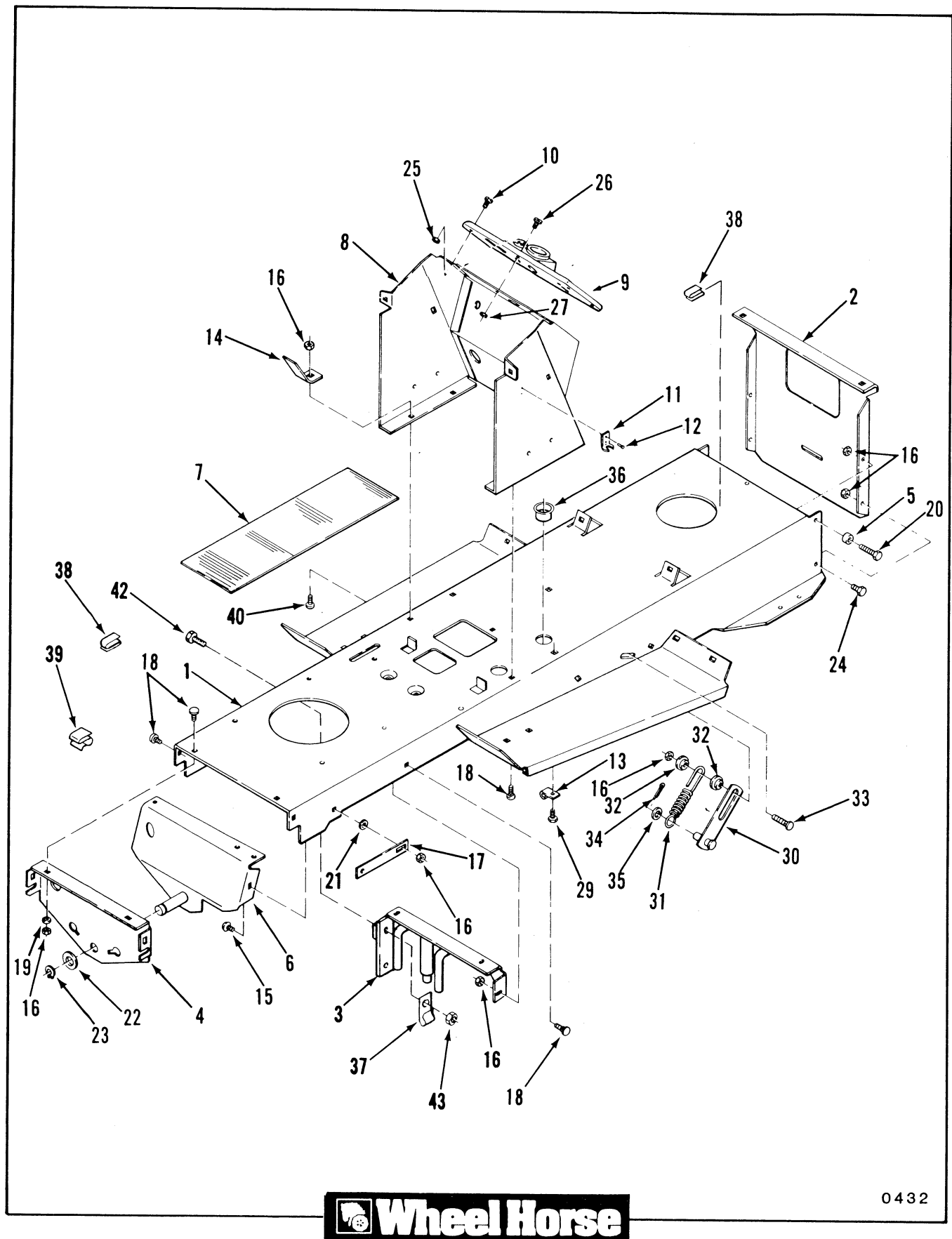
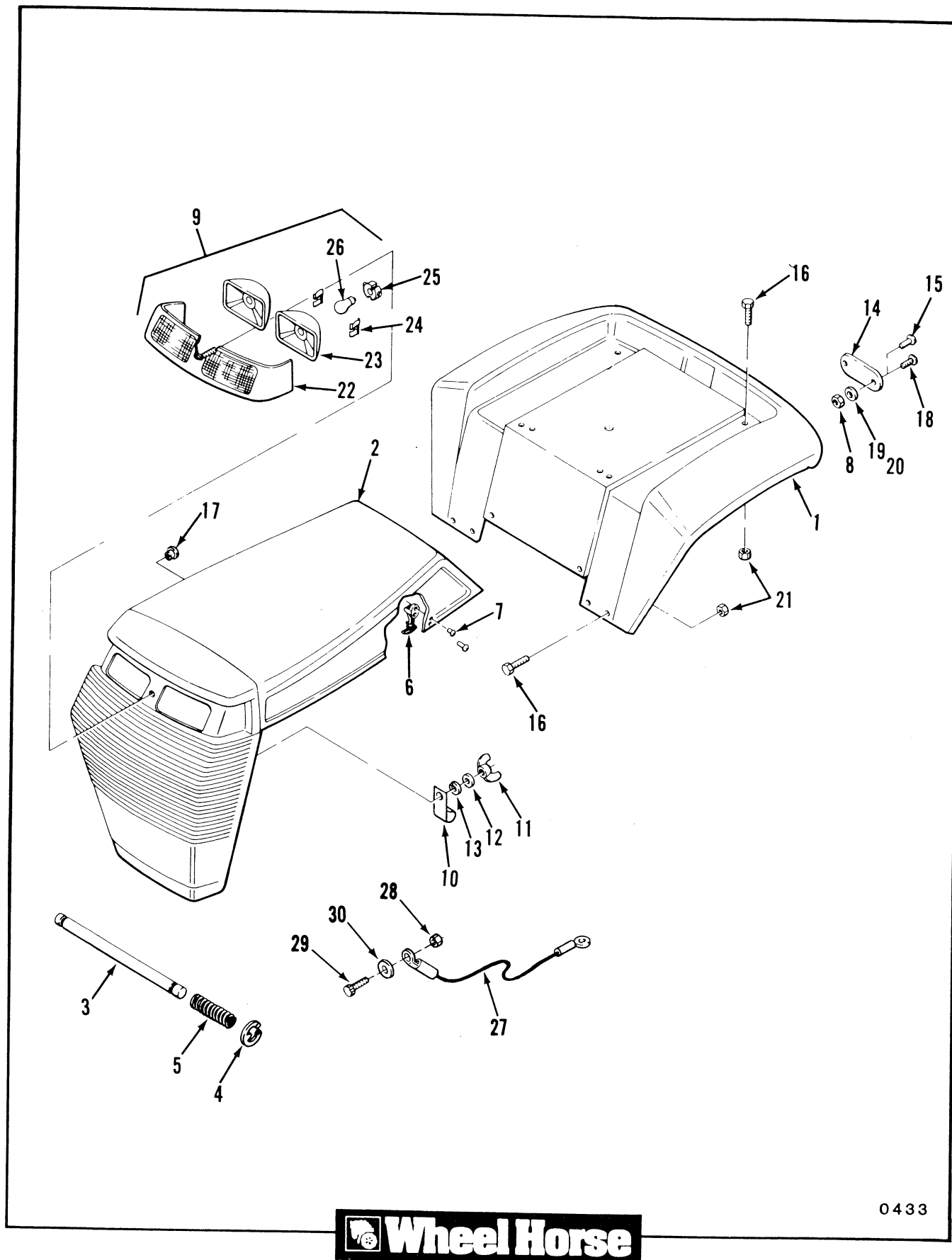


Figure 4-1 Frame, Sheet Metal and Covers

SECTION 4 - FRAME, SHEET METAL AND COVERS

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ITEM	PART NUMBER	DESCRIPTION	Quantity
		Figure 4-1	
		FRAME, SHEET METAL AND COVERS	
1	111394	Frame.....	1
2	111395	Rear Drawbar Plate.....	1
3	112850	Frame Support Plate.....	1
4	111397	Axle Support Plate - Front.....	1
5	100304	Cam Roller.....	2
6	112977	Axle Support - Rear.....	1
7	106488	Footrest Mat - Sandpaper 210-4.....	2
	110180	Footrest Mat - Rubber 212-5.....	2
8	113423	Hoodstand	1
9	111467	Console Panel.....	1
10	111499	Pan Hd Screw 10-24 x 5/8 Black.....	4
11	109237	Latch Keeper.....	2
12	923784	Pop Rivet 1/8 x .232.....	4
13	111392	J-Clip.....	1
14	111671	Fuse Bracket.....	1
15	900038	Carriage Bolt 5/16-18 x 1.....	2
16	915662	E.S. Hex Nut 5/16-18.....	8
17	111763	Strap.....	2
18	900037	Carriage Bolt 5/16-18 x 3/4.....	7
19	920008	Washer 5/16 SAE.....	5
20	908020	Hex Hd Cap Screw 5/16-18 x 1-1/4.....	2
21	920155	Internal Tooth Lockwasher 5/16.....	2
22	1278	Shim Washer .050.....	X
	5210	Shim Washer .015.....	X
23	104822	Retaining Ring 3/4.....	1
24	908016	Hex Hd Cap Screw 5/16-18 x 5/8.....	2
25	915740	Hex Nut 10-24.....	4
26	910837	Croze Recess Pan Mach Screw 1/4-20 x 5/8.....	1
27	915111	Eslok Nut 1/4-20.....	1
29	908017	Hex Bolt 5/16-18 x 3/4.....	3
30	111524	Link.....	2
31	111527	Spring.....	2
32	111758	Bushing.....	4
33	900040	Carriage Bolt 5/16-18 x 1-1/2.....	2
34	932025	Cotter Pin 5/32 x 1.....	2
35	920242	Special Washer.....	2
36	938031	Bushing.....	1
37	8830	Clip.....	1
38	113116	Retainer.....	2
39	519337	Cable Slip.....	1
40	908019	Bolt 5/16-18 x 1.....	2
42	908035	Bolt 3/8-16 x 1-1/4.....	1
43	915663	E.S. Nut 3/8-16.....	1
*	112416	Rear Hitch Bracket.....	1
*	908032	Bolt 3/8-16 x 3/4.....	1
*	920009	Washer 3/8.....	1
*	915663	Nut 3/8-16.....	1
*	107934	Log Screw 1/4x1.....	2
*	106634	Tool Pin.....	1
*	933505	Hairpin Cotter 3/32	1
*	112417	Front Bracket.....	1
*	900234	Carriage Bolt 3/4-16 x1.....	2
*	915663	Nut 3/8-16.....	2
*	107934	Log Screw 1/4 x 1.....	2

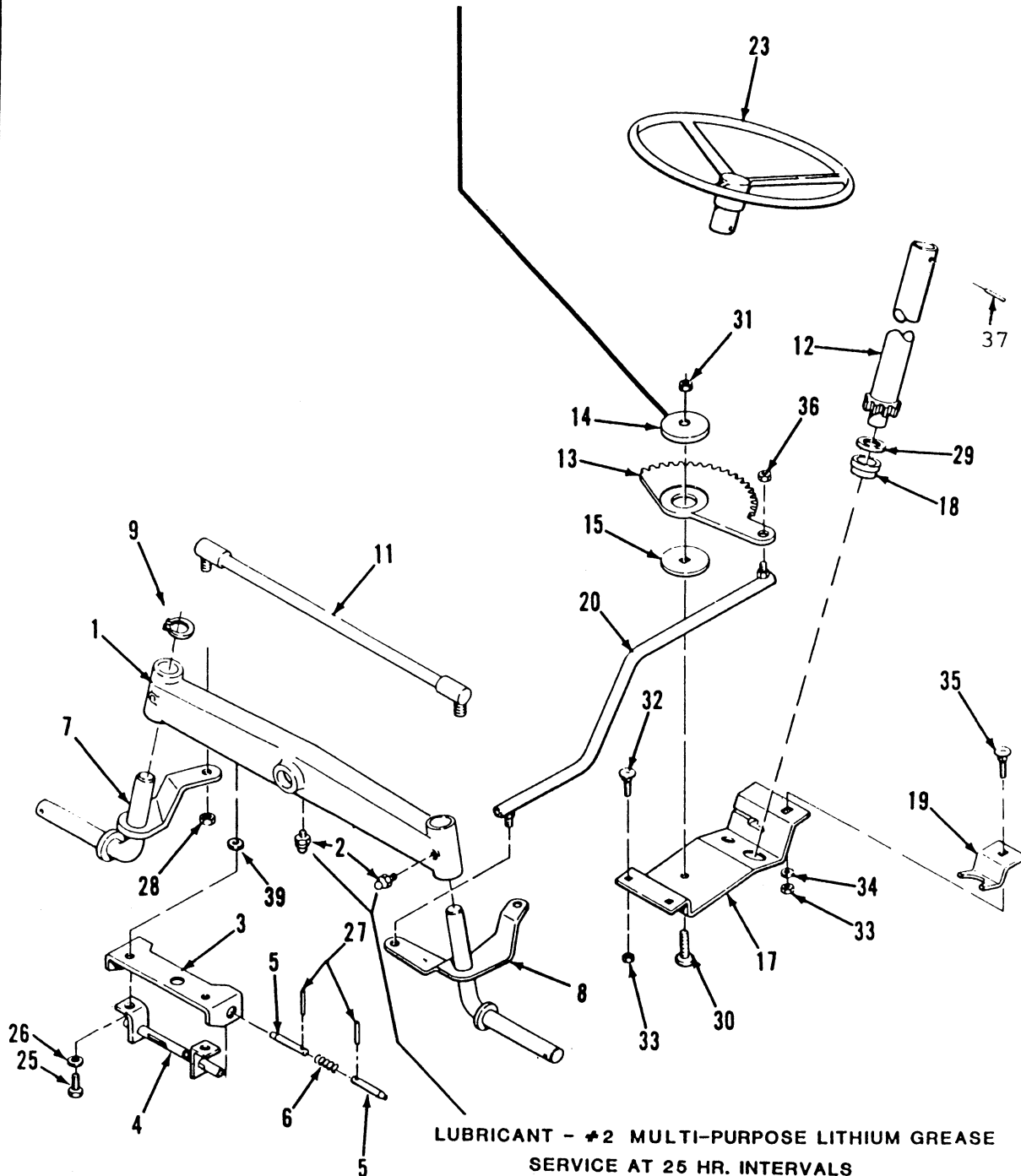


SECTION 4 - FRAME, SHEET METAL AND COVERS

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ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 4-2 FRAME, SHEET METAL AND COVERS			
1	112835	Fender.....	1
2	112705	Hood & Grill 210-4.....	1
	112159	Hood & Grill 212-5.....	1
3	111480	Rod.....	1
4	107772	E-Ring.....	2
5	111536	Spring.....	2
6	106825	Handle w/Bracket (109237).....	2
7	923784	Pop Rivet 1/8 x .294.....	4
8	915551	Nut #10-32 (optional).....	2
9	111533	Head Light Bar (includes items 22,23,24,25, & (2) of 26).....	1
10	111392	Clip 212-6.....	1
11	MW8756	E.S. Wing Nut 1/4-20.....	1
12	103995	Special Washer.....	1
13	920154	Internal Tooth Lockwasher.....	1
14	108547	Reflector.....	2
15	109193	Poprivet .188 x .57 Aluminium.....	4
16	900214	Carriage Bolt 5/16 -18 x 3/4.....	8
17	938031	Bushing.....	2
18	910808	Screw #10-32 x 5/8 (options).....	2
19	920004	Washer #8 used w/poprivet - production).....	2
20	920079	Lockwasher #10 (options).....	2
21	915662	E.S. Hex Nut 5/16-18.....	8
22	111471	Light Bar.....	1
23	111684	Light Pods.....	2
24	111685	Light Retainers.....	4
25	111686	Light Sockets.....	2
26	7228	Light Bulb.....	2
27	112708	Hood Lanyard Cable.....	1
28	915740	E.S. Hex Nut #10-24.....	1
29	913111	Machine Hd Screw #10-24 x 1/2.....	1
30	112925	Backing Washer.....	1

SEE SECTION 18 FOR ADJUSTMENT PROCEDURES



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Figure 5-1 Front Axle and Steering

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 5-1 FRONT AXLE AND STEERING			
1	114385	Axle - Front.....	1
2	1030	Grease Fitting.....	3
3	112847	Support Bracket.....	1
4	113044	Tube.....	1
5	113030	Pin.....	2
6	111531	Spring.....	1
7	111406	RH Spindle.....	1
8	111409	LH Spindle.....	1
9	104822	Retaining RIng 3/4.....	2
11	112981	Tie Rod.....	1
12	111413	Pinion Shaft.....	1
13	111417	Sector Gear.....	1
14	111418	Excentric Bushing.....	1
15	111419	Washer.....	1
17	113106	Steering Gear Bracket.....	1
18	110391	Bushing.....	1
19	111422	Retainer.....	1
20	111423	Drag Link Rod.....	1
23	111425	Steering Wheel - 13" Plastic.....	1
25	908018	Hex Hd Cap Screw 5/16-18 x 7/8.....	2
26	920082	Lockwasher 5/16.....	2
27	933268	Spirol Pin 3/16 x 1-1/2.....	2
28	915001	Eslok Hex Nut 5/16-24.....	1
29	1278	Washer .050.....	X
30	900235	Bolt 3/8-16 x 1-1/4.....	1
31	108881	Lock Hex Nut 3/8-16.....	1
32	900037	Carriage Bolt 5/16-18 x 3/4.....	2
33	915662	E.S. Hex Nut 5/16-18.....	3
34	920008	Washer 5/16 SAE.....	1
35	900038	Carriage Bolt 5/16-18 x 1.....	1
36	915002	Eslok Hex Nut 3/8-16.....	1
37	933272	Spriol Pin 5/16 x 1-3/8.....	1
39	2844	Special Washer.....	2

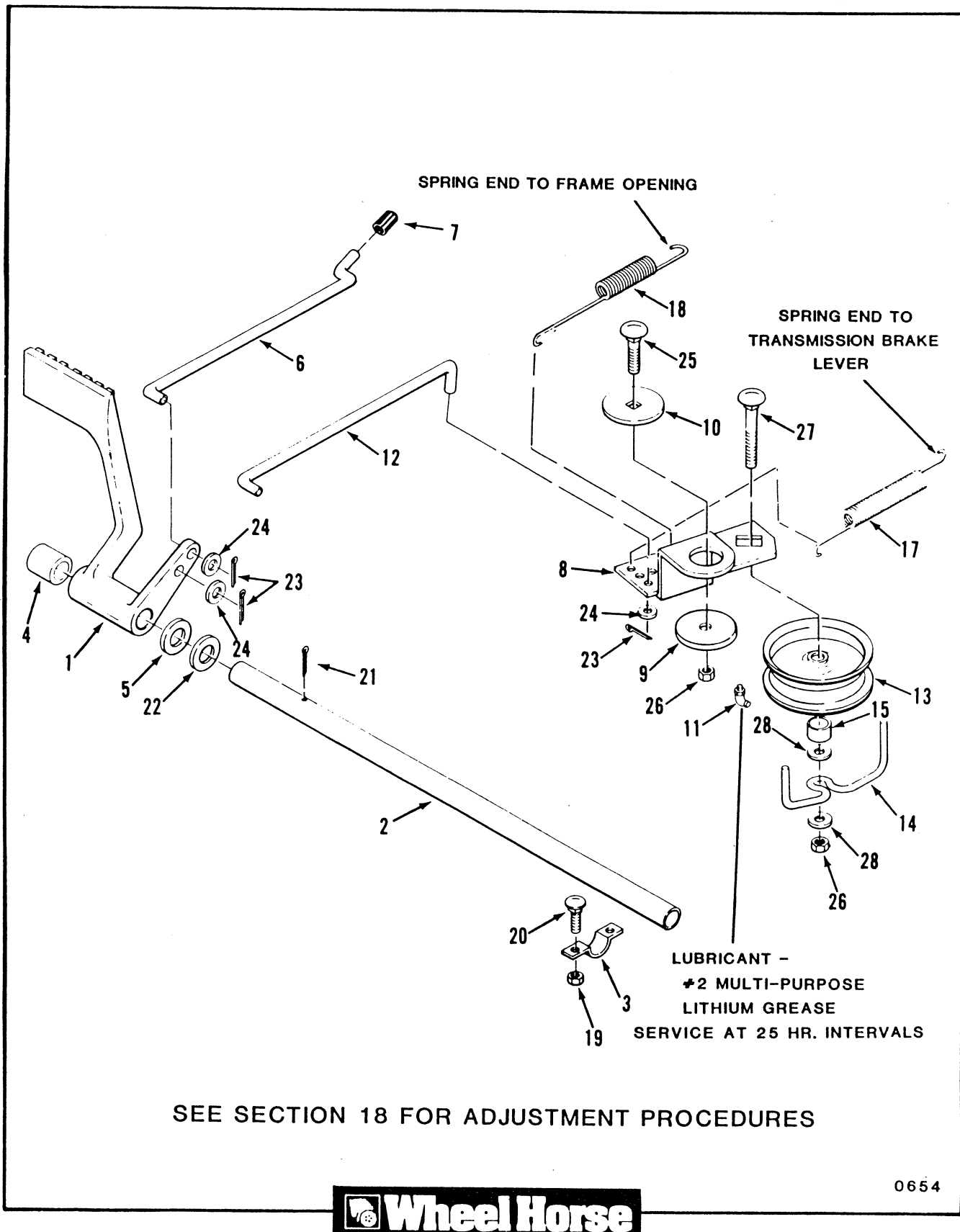
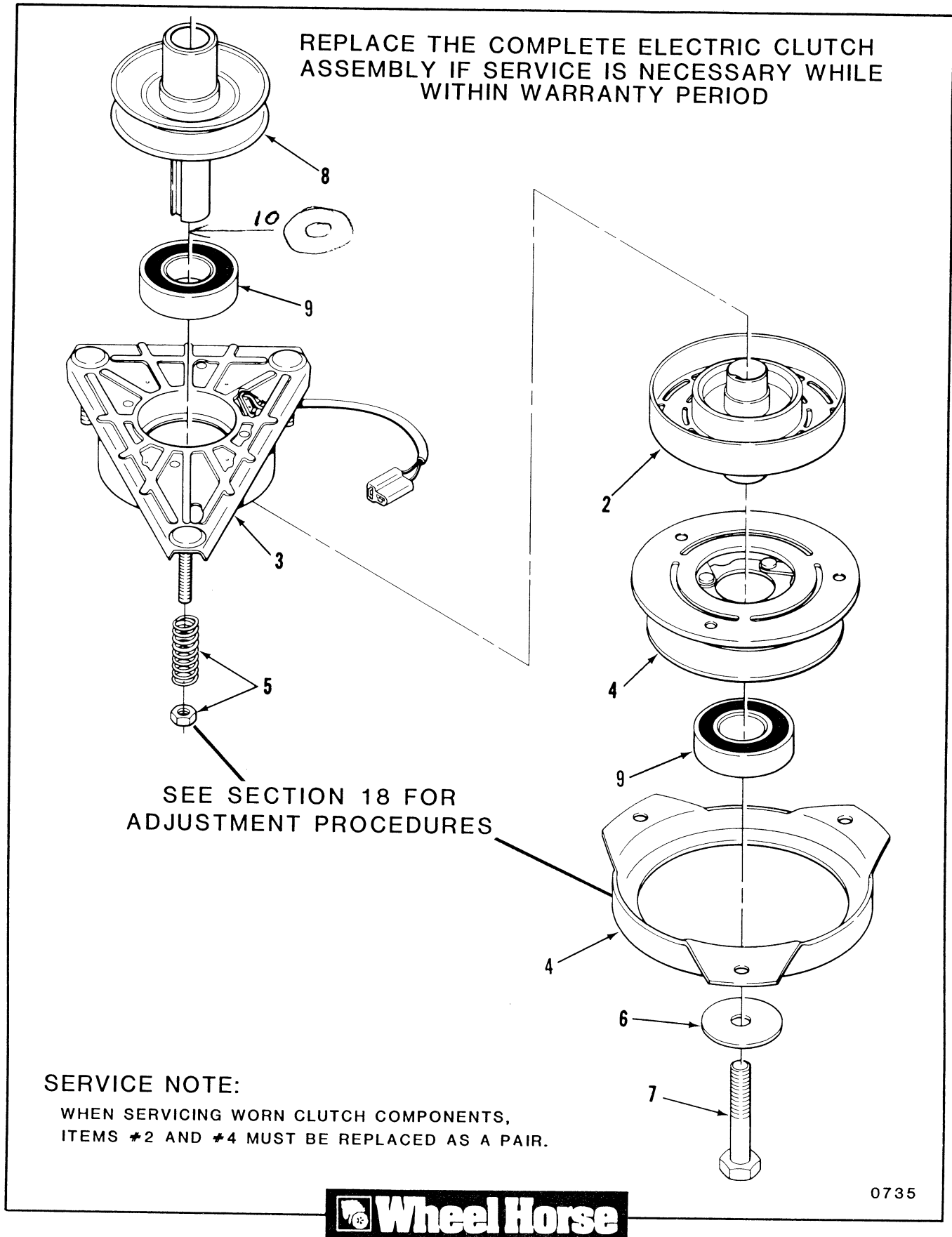


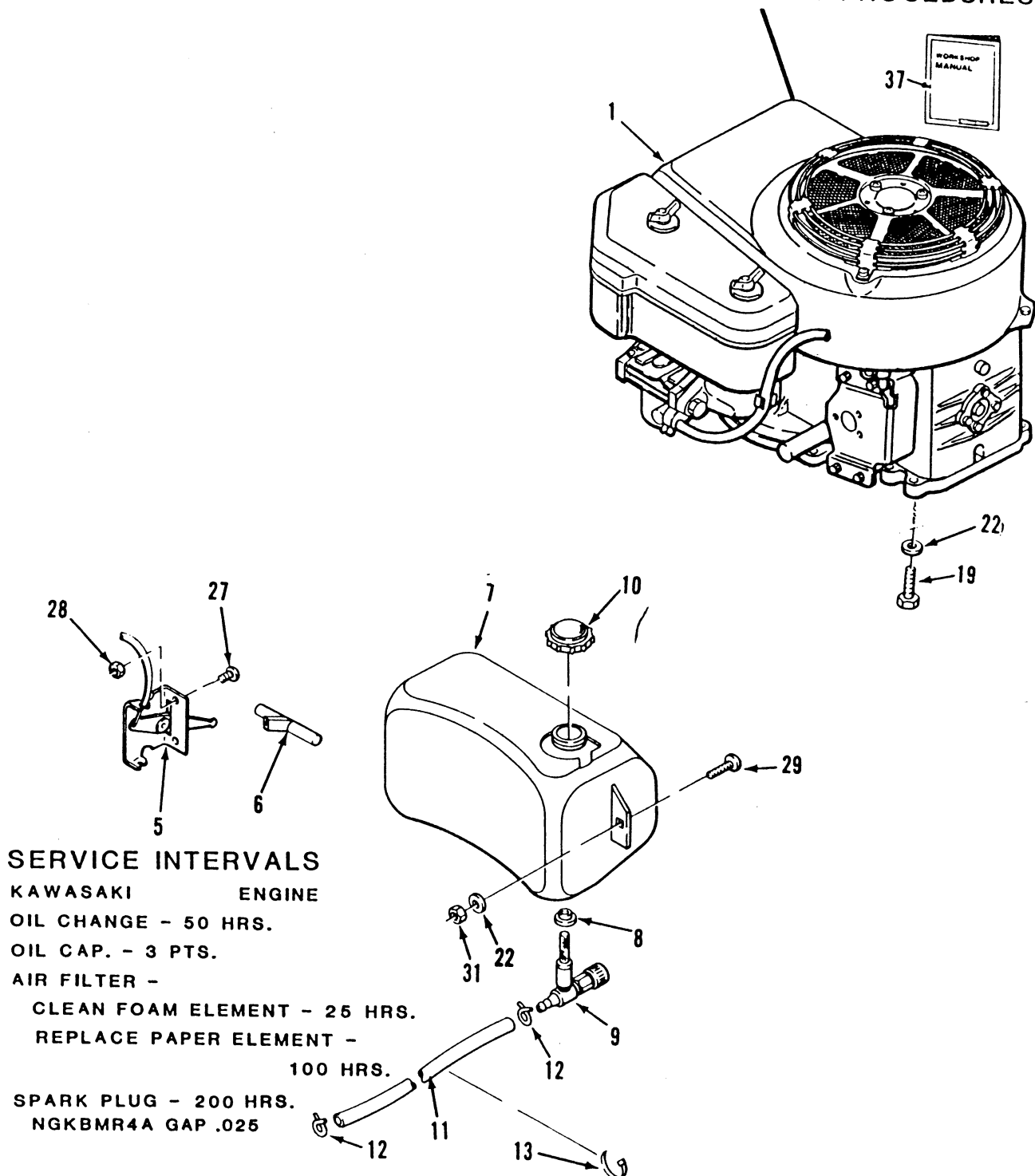
Figure 6-1 Brake and Clutch Linkage

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 6-1 BRAKE AND CLUTCH LINKAGE			
1	111436	Clutch/Brake Pedal.....	1
2	111437	Pedal Shaft.....	1
3	106288	Shaft Clamp.....	2
4	110015	Spacer.....	1
5	111712	Wave Washer.....	1
6	112984	Lock Rod.....	1
7	111439	Grip.....	1
8	111440	Idler Arm.....	1
9	111418	Excentric Bushing.....	1
10	111419	Washer.....	1
11	111420	Grease Fitting 45°.....	1
12	113129	Clutch/Brake Rod.....	1
13	111442	Idler Pulley.....	1
14	111443	Belt Guide.....	1
15	104525	Spacer.....	1
17	111445	Brake Spring (9.75").....	1
18	107282	Clutch Spring (7.88").....	1
19	915662	E.S. Hex Nut 5/16-18.....	4
20	900037	Carriage Bolt 5/16-18 x 3/4.....	4
21	932025	Cotter Pin 5/32 x 1.....	1
22	920215	Washer.....	1
23	932008	Cotter Pin 3/32 x 3/4.....	3
24	920008	Washer 5/16 SAE.....	3
25	900064	Carriage Bolt 3/8-16 x 1-1/4.....	1
26	915663	E.S. Hex Nut 3/8-16.....	2
27	900239	Carriage Bolt 3/8-16 x 2-1/4.....	1
28	920009	Washer 3/8 SAE.....	2



ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 7-1 ENGINE PULLEY AND PTO CLUTCH			
	113426	Electric Clutch Assy (includes items 2,3,4 & 5).....	1
2	113820	Rotor Assy.....	1
3	113821	Field Assy (includes one of item 9).....	1
4	114570	Armature and Pulley Assy (includes one of item 9 and Brake Plate).....	1
5	113823	Springs & Nuts.....	3
6	112843	Washer.....	1
7	112853	Bolt M10x1.50 x 120.....	1
8	112858	Engine Pulley.....	1
9	114064	Ball Bearing.....	2
10	114271	Washer.....	1

SEE SECTION 18 FOR ADJUSTMENT PROCEDURES



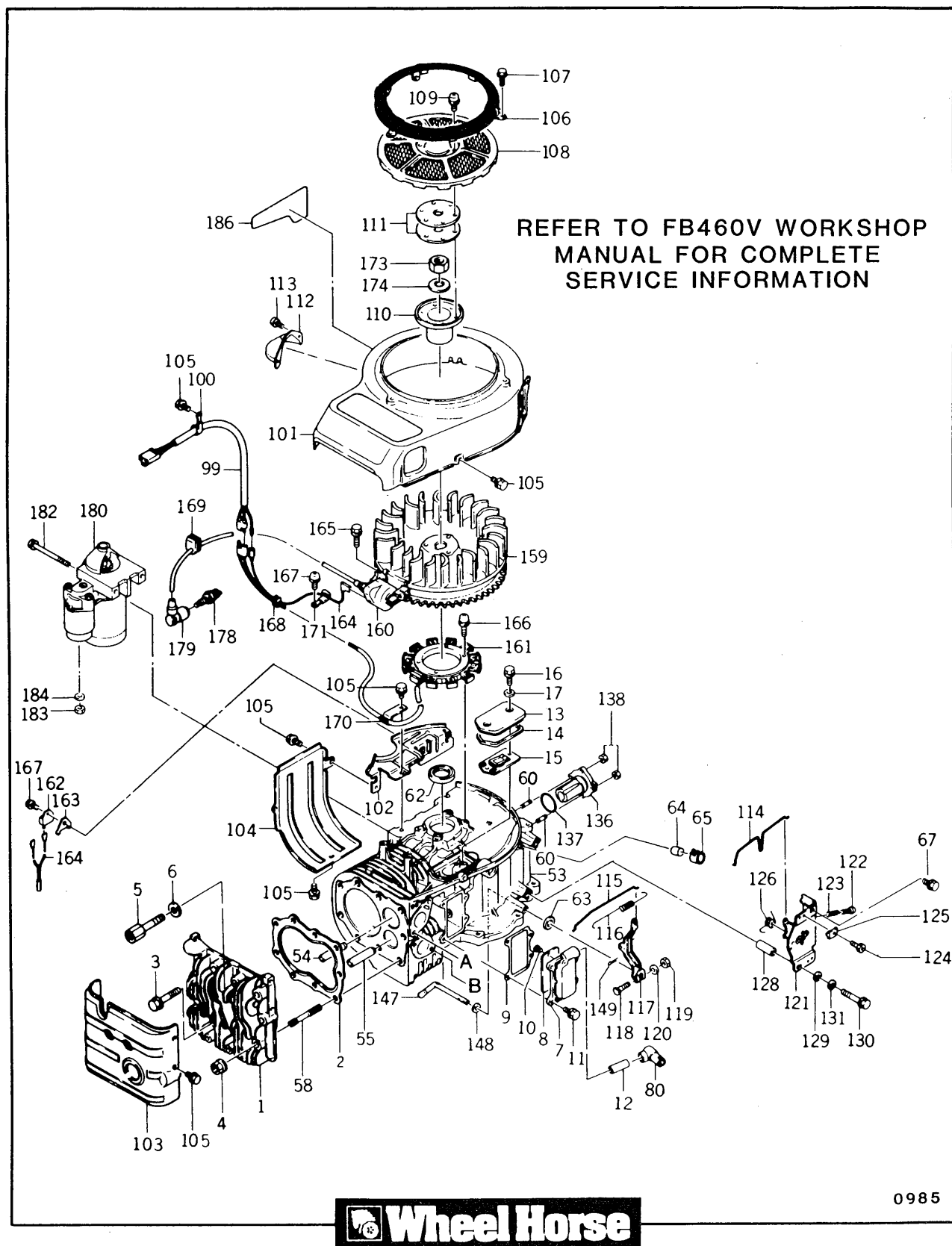
REFER TO KAWASAKI WORKSHOP MANUAL FOR FURTHER ADJUSTMENT PROCEDURES



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Figure 9-1 Engine, Fuel & Exhaust Systems

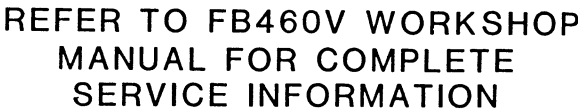
ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-1 ENGINE, FUEL & EXHAUST SYSTEMS			
1	113483	Engine -9HP - Kawasaki Model FC 290, 210-4 Only.....	X
	113424	Engine - 12HP - Kawasaki Model FB460V, 212-5.....	X
5	111462	Choke/Throttle Control 210-4.....	1
	114154	Choke/Throttle Control 212-5.....	1
6	107045	Knob.....	1
7	111472	Fuel Tank with Valve Assembly and Bushing.....	1
8	104047	Bushing.....	1
9	110425	Valve.....	1
10	111474	Gas Cap.....	1
11	112442	Fuel Line 22".....	1
12	108898	Hose Clamp.....	2
13	100581	Cable Tie.....	1
19	908022	Bolt M8x1.25 x 25M.....	4
22	920008	Washer 5/16 SAE.....	4
27	910792	Pan Hd Cross Recess Screw #10-24.....	2
28	915740	E.S. Hex Nut #10-24.....	2
29	900037	Carriage Bolt 5/16-18 x 3/4.....	2
31	915662	E.S. Hex Nut 5/16-18.....	2
37	99924-2011	Kawasaki FB460V Workshop Manuel.....	2



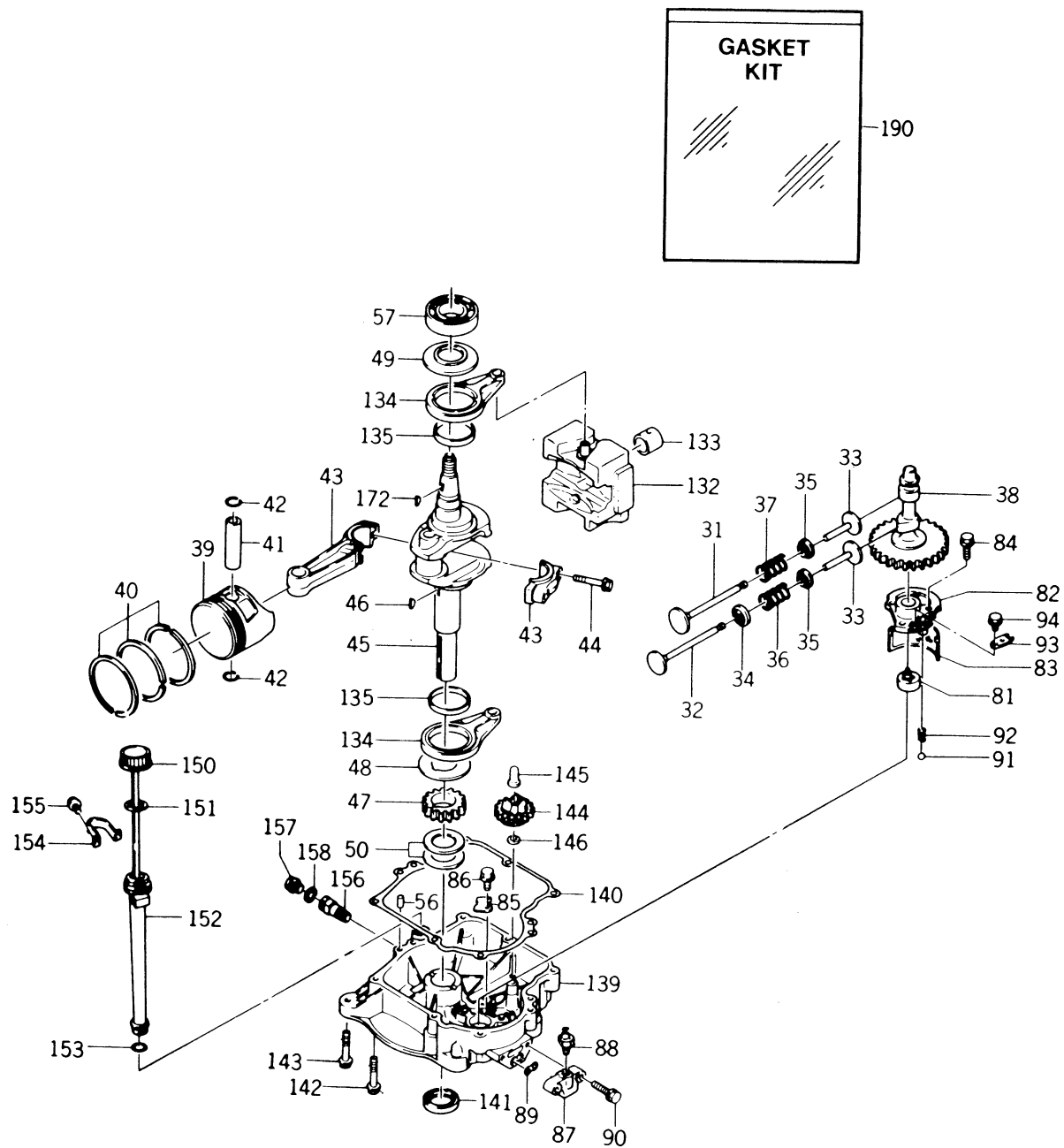
ITEM	PART NUMBER	DESCRIPTION	Quantity
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Figure 9-2
KAWASAKI FB460V TYPE AS-13 ENGINE

1	11001-2076	Cylinder Head.....	1
2	11004-2079	Head Gasket.....	1
3	130G1055	Bolt 10x55.....	4
4	92015-2115	Nut 10mm.....	3
5	92002-2258	Bolt.....	2
6	410B1000	Washer.....	2
7	49108-2011	Valve Chamber Cover.....	1
8	14025-2143	Cover.....	1
9	11009-2502	Gasket.....	1
10	314405-3092A	Screw.....	2
11	130G0616	Flanged Bolt 6x16.....	4
12	92059-2142	Tube.....	1
13	14025-2040	Cover.....	1
14	11009-2339	Gasket.....	1
15	14069-2062	Breather.....	1
16	315501-5381A	Bolt.....	2
17	312200-7415-02	Gasket.....	2
53	49120-6024	Crankcase Complete (includes items 54 & 55).....	1
54	49002-2070	Valve Guide - Internal.....	1
55	49002-2071	Valve Guide - External.....	1
58	92004-2082	Stud.....	3
60	92004-2083	Stud.....	4
62	92049-2096	Oil Seal.....	1
63	92049-2097	Oil Seal.....	1
64	92066-2096	Plug.....	1
65	317196-6812-00	Clamp.....	1
67	130B0610	Bolt 6x10.....	2
80	59071-2062	Joint.....	1
99	26001-2113	Harness.....	1
100	313646-8161-00	Clamp.....	1
101	59066-2361-9H	Fan Housing.....	1
102	59066-2295-9H	Pan Housing.....	1
103	49089-2181-9H	Shroud.....	1
104	49089-2199-9H	Shroud.....	1
105	130B0610	Bolt 5x10.....	11
106	55020-2071-9H	Guard.....	1
107	130B0508	Bolt 5x8.....	1
108	14037-2104-9H	Screen.....	3
109	224B0616	Screw 6x16.....	3
110	11043-2163	Bracket.....	1
111	92025-2003	Shim.....	X
112	14024-2028-9H	Cover.....	1



ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-2 KAWASAKI FB460V Type AS-13 ENGINE (CONT'D)			
113	234B0408	Screw 4x8.....	2
114	16169-2074	Choke Link.....	1
115	16171-2001	Link.....	1
116	92081-2213	Spring.....	1
117	21187-2052	Governor Arm Complete.....	1
118	92002-2269	Bolt.....	1
119	311B0600	Nut 6mm.....	1
120	411B0600	Washer.....	1
121	49113-2065	Control Panel Assy (includes items 122,123,124, 125 & 126.....	1
122	220B0425	Screw 4x25.....	1
123	314401-5321B	Spring.....	1
124	310701-1225A	Bolt.....	1
125	92037-2020	Clamp.....	1
126	92081-2316	Spring.....	1
128	92027-2071	Collar.....	2
129	311509-3595-00	Nut 6mm.....	2
130	112B0650	Bolt 6x50.....	2
131	461F0600A	Spring Washer.....	2
136	13107-2091	Shaft.....	1
137	92055-2072	O-Ring.....	1
138	92015-1193	Nut.....	4
147	39003-2062	Pivot Arm.....	1
148	410B0600	Washer.....	1
149	554A0600	Snap Pin.....	1
159	21193-2001	Flywheel Complete.....	1
160	21121-2008	Ignition Coil.....	1
161	59031-2003	Charging Ccil.....	1
162	21119-2095	Igniter.....	1
163	310702-8137A	Bracket.....	1
164	26011-2119	Lead Wire.....	1
165	130B0525	Bolt 5x25.....	2
166	224B0620	Screw 6x20.....	4
167	234B0408	Screw 4x8.....	3
168	92071-2099	Grommet.....	1
169	92071-2100	Grommet.....	1
170	92037-2158	Ignition Coil.....	1
171	311901-8161A	Clamp.....	1
173	314G1800	Nut 18mm.....	1
174	92022-2178	Washer.....	1
178	92070-2072	Spark Plug.....	1
180	21163-2070	Electric Starter Assy - see section 9-7 for parts breakdown.....	1
182	92002-2278	Bolt.....	2
183	317B0800	Nut 8mm.....	2
184	920008	Lockwasher 5/16.....	2

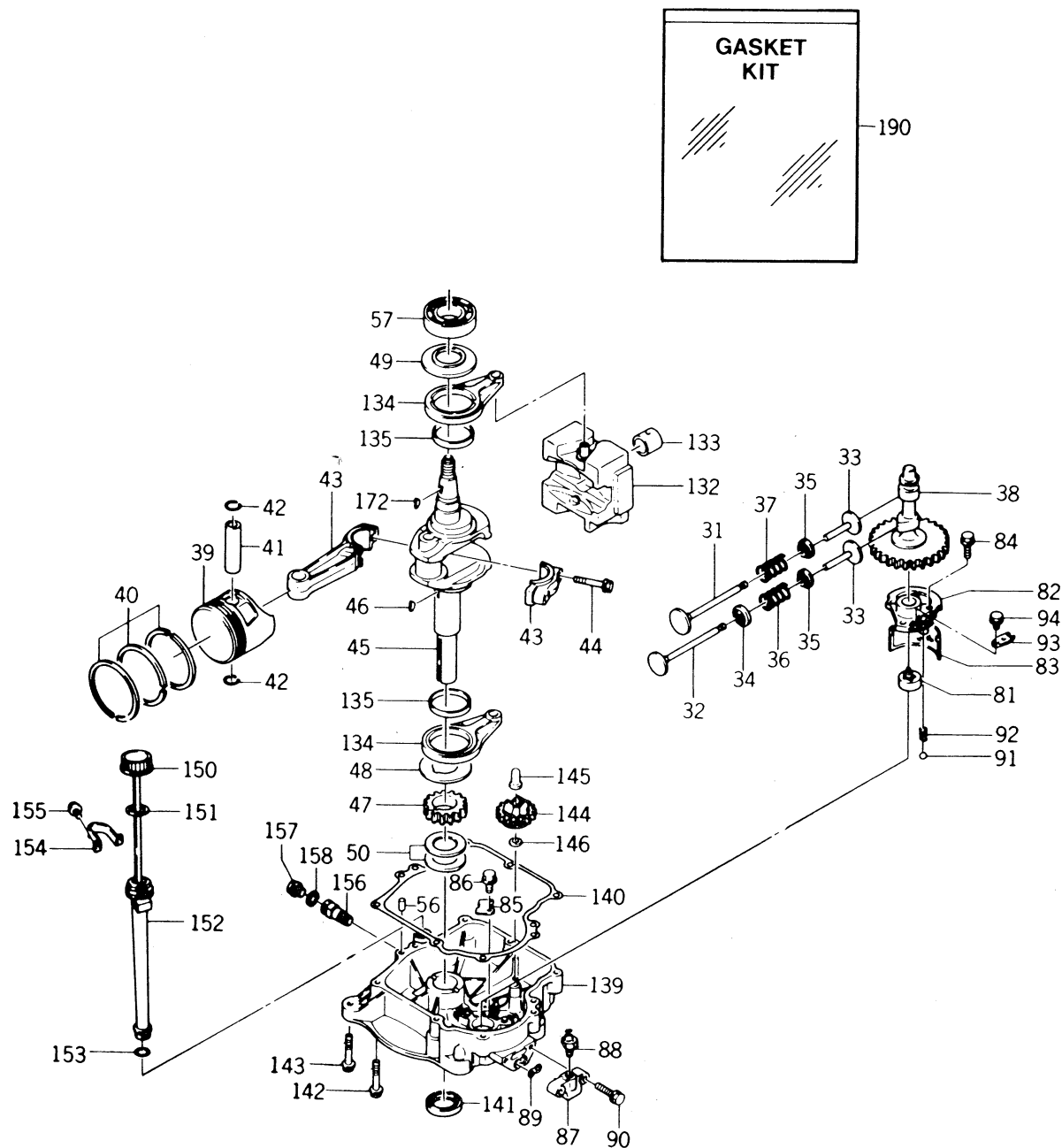


REFER TO FB460V WORKSHOP MANUAL
FOR COMPLETE SERVICE INFORMATION



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ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-3 KAWASAKI FB460V TYPE AS-13 ENGINE			
31	12004-2076	Intake Valve.....	1
32	12005-2066	Exhaust Valve.....	1
33	12032-2058	Tappet.....	2
34	12039-2052	Rotator.....	1
35	39108-2054	Spring Retainer.....	2
36	49078-2058	Valve Spring.....	1
37	49078-2059	Valve Spring.....	1
38	12044-2109	Cam Shaft.....	1
39	13001-2084	Piston - Standard.....	1
	13029-2019	Piston - .010 Over Size.....	X
	13029-2020	Piston - .020 Over Size.....	X
	13027-2001	Piston - .030 Over Size.....	X
40	13008-6001	Piston Ring Set - Standard.....	1
	13008-6002	Piston Ring Set - .010 Over Size.....	X
	13008-6003	Piston Ring Set - .020 Over Size.....	X
	13008-6004	Piston Ring Set - .030 Over Size.....	X
41	13002-2066	Piston Pin.....	1
42	92033-2066	Snap Ring.....	2
43	13251-6005	Connecting Rod Ass'y - Standard (includes item 44).....	1
	13251-6007	Connecting Rod Ass'y - .025mm Under Size (includes item 44).....	1
44	315801-3245A	Connecting Rod Bolt.....	2
45	49119-2115	Crankshaft Complete.....	1
46	510A5100	Key.....	1
47	59056-2018	Helical Gear.....	1
48	92026-2156	Spacer.....	1
49	92026-2164	Spacer.....	1
50	92025-2145	Shim - 1.18mm.....	X
	92025-2146	Shim - 1.25mm.....	X
	92025-2147	Shim - 1.32mm.....	X
	92025-2148	Shim - 1.39mm.....	X
	92025-2149	Shim - 1.46mm.....	X
	92025-2150	Shim - 1.53mm.....	X
	92025-2151	Shim - 1.60mm.....	X
	92025-2152	Shim - 1.67mm.....	X
	92025-2153	Shim - 1.74mm.....	X
56	92043-2111	Dowel Pin.....	2
57	601A6207	Ball Bearing.....	1
81	16142-2057	Oil Pump Assy.....	1
82	16142-6001	Pump Cover Complete.....	1
83	49065-2056	Oil Filter - Internal.....	1
84	130G0825	Bolt 8x25.....	3
85	13169-2359	Plate.....	1
86	130G0508	Bolt 5x8.....	1
87	14025-2145	Cover.....	1
88	317471-8620A	Oil Pressure Switch.....	1
89	92055-2063	O-Ring.....	1
90	130B0530	Bolt 8x30.....	2
91	600A1000	Steel Ball.....	1



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ITEM	PART NUMBER	DESCRIPTION	Quantity
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Figure 9-3

KAWASAKI FB460V TYPE AS-13 ENGINE (CCNT'D)

92	92081-2216	Spring.....	1
93	13169-2360	Plate.....	1
94	130B0610	Bolt 6x10.....	1
132	13042-6006	Weight Complete (includes item 133).....	1
133	92141-2007	Plain Bearing.....	1
134	46102-6001	Rod Assy (includes item 135).....	2
135	92141-2094	Plane Bearing.....	2
139	49015-6001	Crankcase Cover Complete.....	2
140	11009-2337	Gasket.....	1
141	92049-2104	Oil Seal.....	1
142	130G0845	Bolt 8x45.....	8
143	130G0825	Bolt 8x25.....	4
144	49110-2067	Governor Assy.....	1
145	42036-2060	Sleeve.....	1
146	314401-5135A	Washer.....	1
150	52005-2058	Gauge.....	1
151	11009-2346	Gasket.....	1
152	59231-2059	Filler.....	1
153	670D2016	O-Ring.....	1
154	92037-2160-9H	Clamp.....	1
155	130B0508	Bolt 5X8.....	1
156	56071-2063	Joint.....	1
157	92066-2092	Plug.....	1
158	317370-7883-00	Gasket.....	1
172	510A5100	Key.....	1
190	11028-6001	Overhaul Gasket Set.....	X

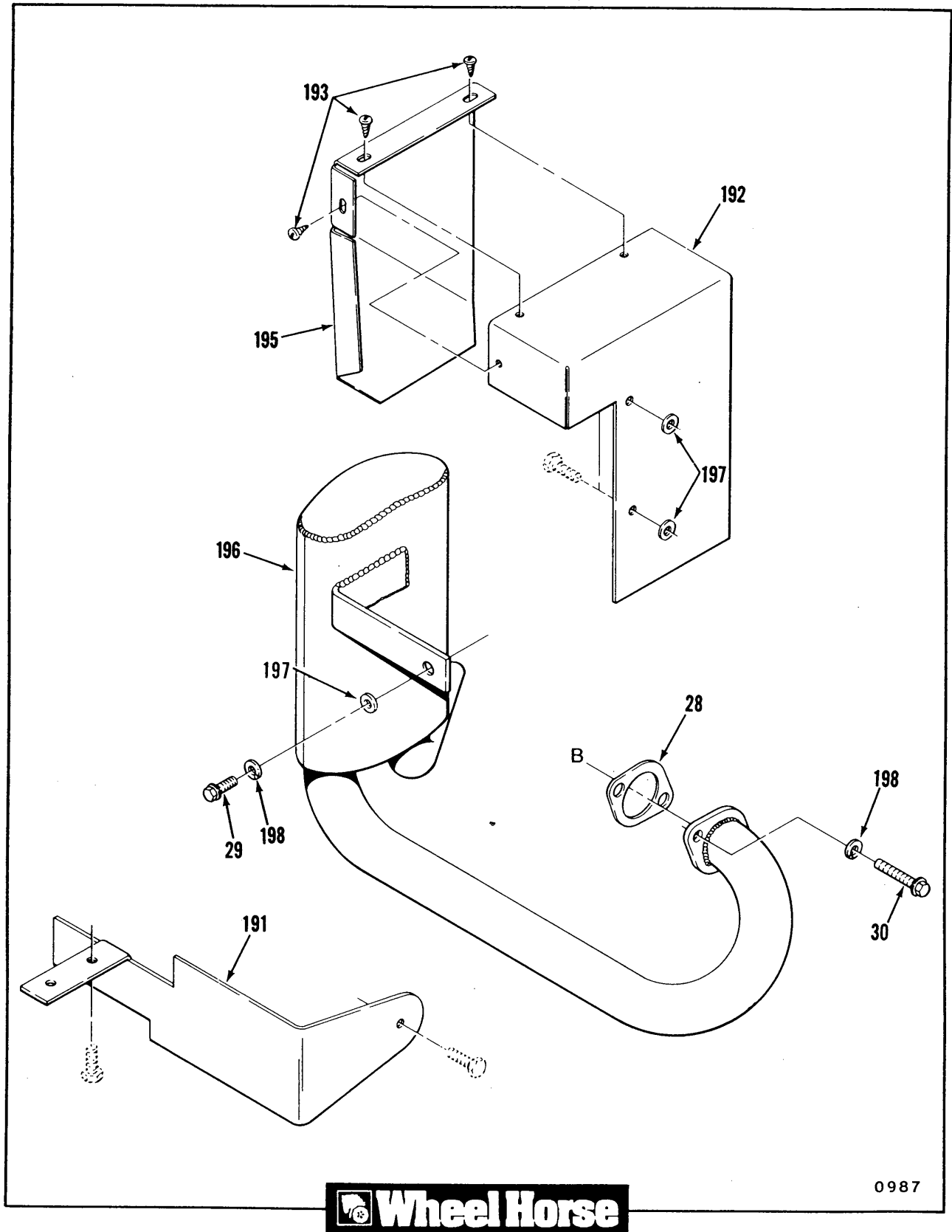
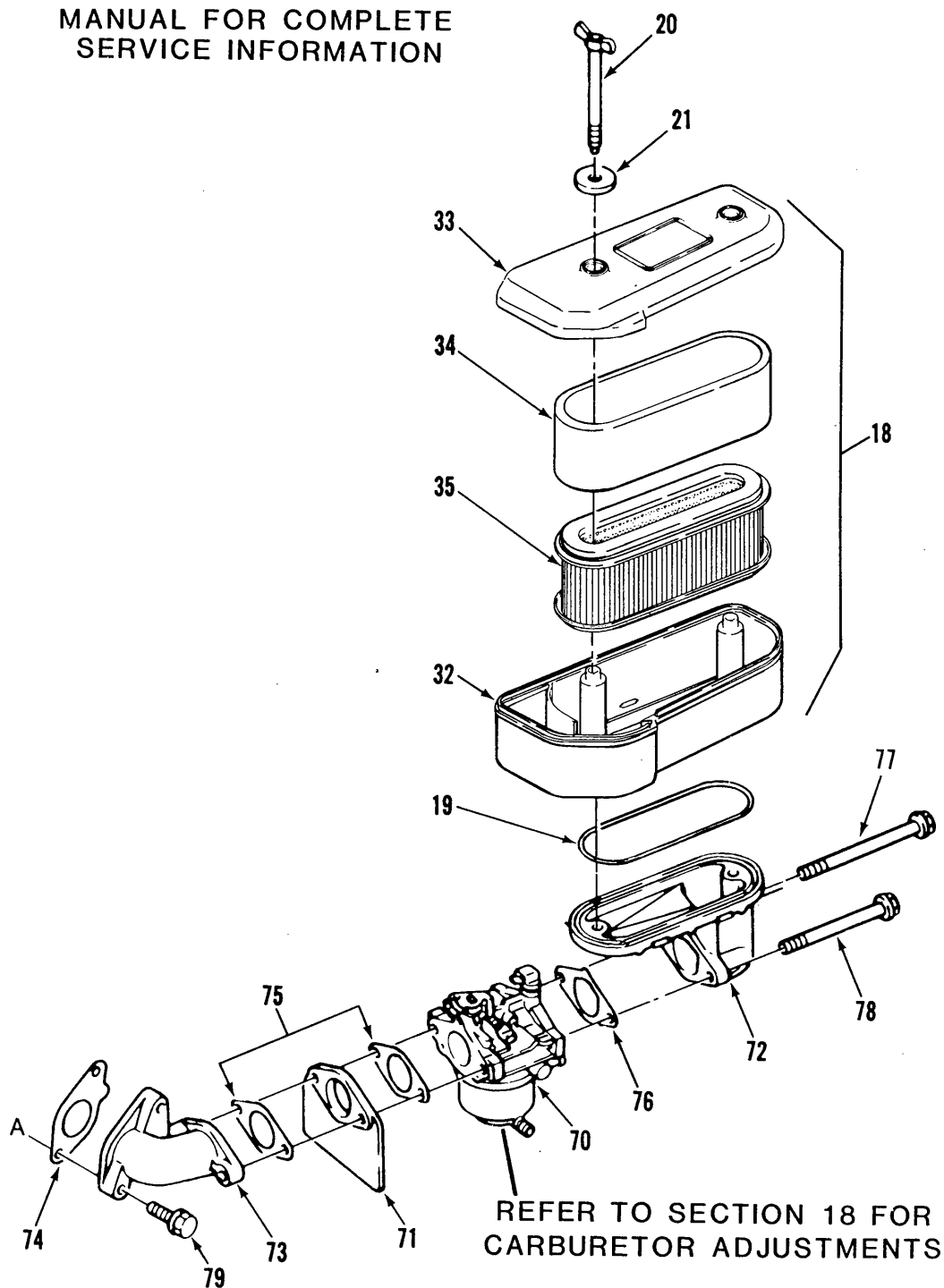


Figure 9-4 Kawasaki FB460V Type AS-13 Engine Muffler & Exhaust

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-4 MUFFLER AND EXHAUST			
28	KW10251	Gasket 210-4.....	1
	KW10011	Gasket 212-5.....	&
29	130G0812	Flanged Bolt 8x14.....	4
30	130G0845	Flanged Bolt 8x45.....	2
191	112523	Deflector 212-5.....	1
192	113436	Heat Shield 212-5.....	1
193	913406	Screw #8-32 x 3/8 212-5.....	3
195	113437	Heat Shield 212-5.....	1
196	113009	Muffler-Black 212-5.....	1
	113883	Muffler 210-4.....	1
197	920008	Washer 5/16.....	3
198	920082	Lockwasher 5/16.....	3

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ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-5 AIR FILTER & CARBURETOR			
18	11010-2291	Air Filter Assy (includes items 32,33,34 & 35)...	1
19	11009-2443	Gasket.....	1
20	92002-2230	Bolt.....	2
21	92022-2220	Washer.....	2
32	11011-2158	Air Filter Case.....	1
33	11012-2192	Air Filter Cap.....	1
34	11013-2020	Air Filter Element - Foam.....	1
35	11013-2021	Air Filter Element Pleated Paper.....	1
70	15001-2661	Carburetor Assy - see section 9-6 for parts breakdown.....	1
71	16073-2091	Insulator.....	1
72	16060-2108	Intake Manifold.....	1
73	16060-2109	Intake Manifold.....	1
74	11009-2342	Gasket.....	1
75	11009-2343	Gasket.....	2
76	11009-2344	Gasket.....	1
77	92002-2254	Bolt.....	1
78	92002-2253	Bolt.....	1
79	130G0825	Bolt 8x25.....	2

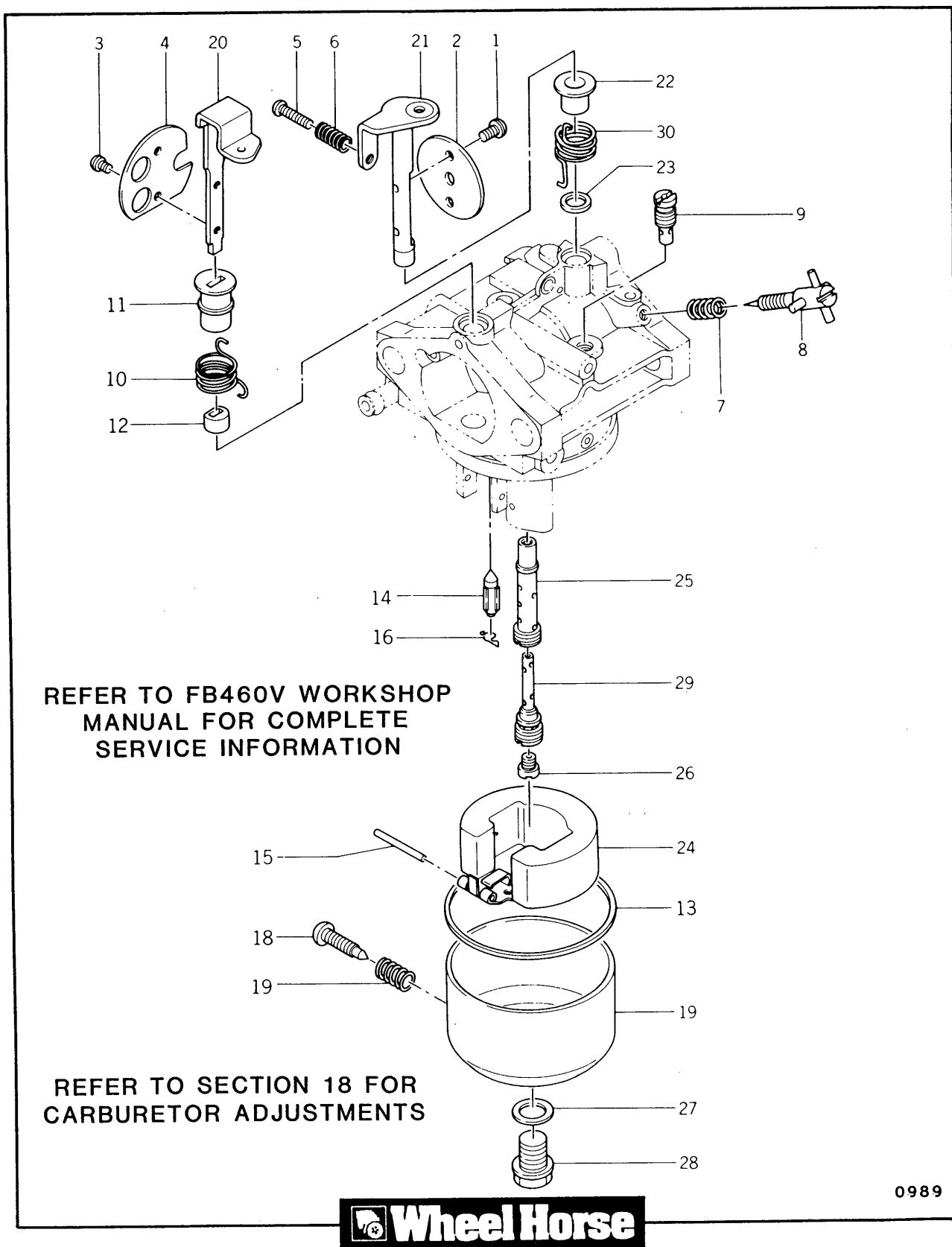
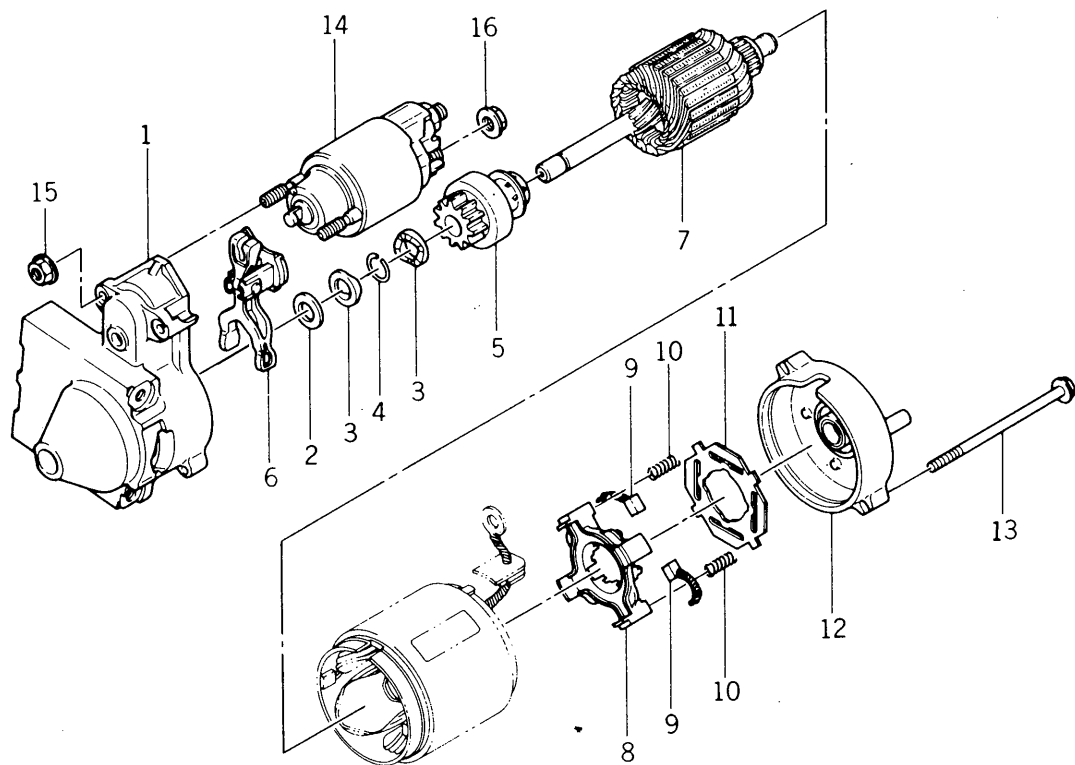


Figure 9-6 Kawasaki FB460V Type AS-13 Engine Carburetor

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-6 CARBURETOR			
1	316550-6137A	Screw.....	2
2	16025-2101	Throttle Valve.....	1
3	314572-6137A	Screw.....	2
4	16126-2015	Choke Valve.....	1
5	92009-2079	Screw.....	1
6	313650-6108-00	Spring.....	1
7	312750-6116-00	Spring.....	1
8	16014-2055	Adjuster Screw.....	1
9	316511-6112-00	Pilot Jet (#65).....	1
10	92081-2078	Spring.....	1
11	90227-2026	Ring.....	1
12	314598-6138A	Ring.....	1
13	313650-6128-00	Gasket.....	1
14	16030-2067	Needle valve Assy.....	1
15	314499-6127A	Float Pin.....	1
16	314595-6134A	Clip.....	1
17	16020-2005	Float Chamber Assy (includes items 18 & 19).....	1
18	315470-6133A	Drain Screw.....	1
19	313122-6116-00	Spring.....	1
20	16041-2010	Choke Shaft.....	1
21	16041-2009	Throttle Shaft.....	1
22	92027-2025	Ring.....	1
23	316616-6206A	Seal.....	1
24	315801-6126A	Float.....	1
25	49121-2077	Main Nozzle (#6A).....	1
26	92063-2010	Main Jet (#112.5).....	1
27	318190-6159-00	Washer.....	1
28	314486-6143A	Bolt.....	1
29	49123-2016	Main Jet Holder.....	1
30	92081-2077	Spring.....	1
31	99997-6001	Carburetor Gasket Set.....	X



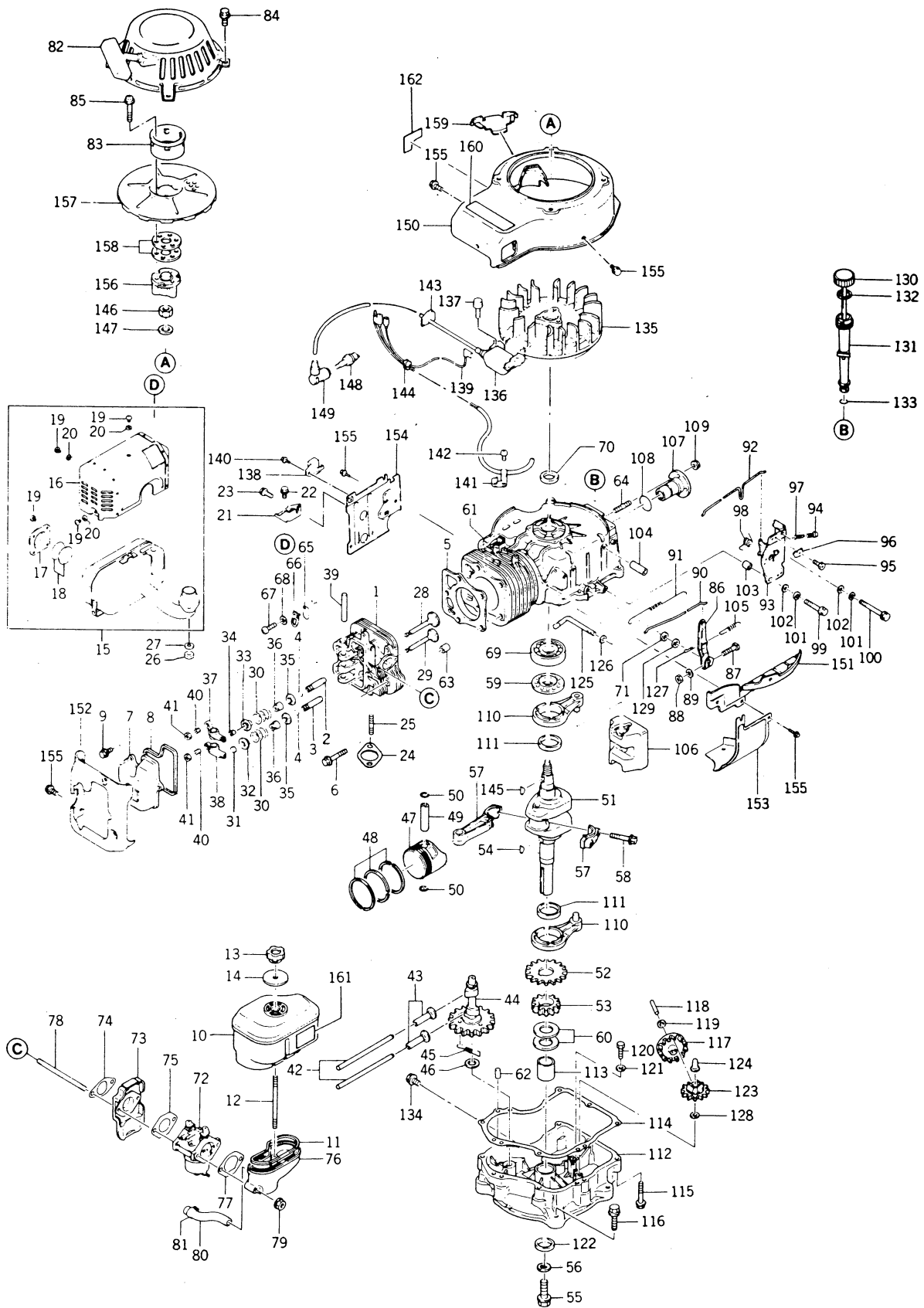
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ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 9-7 ELECTRIC STARTER			
1	16146-2076	Cover Assy.....	1
2	92022-2218	Washer Assy.....	1
3	32085-2066	Stopper.....	2
4	92033-2081	Snap Ring.....	1
5	13081-2085	Clutch Assy.....	1
6	13168-2131	Lever.....	1
7	21080-2054	Armature.....	1
8	13091-2068	Brush Holder.....	1
9	21039-2059	Brush.....	4
10	21040-2052	Brush Spring.....	4
11	16073-2098	Insulatory.....	1
12	16146-2077	Cover Assy.....	1
13	92002-2277	Bolt.....	2
14	27010-2122	Switch Assy.....	1
15	92015-2146	Nut.....	2
16	92015-2147	Nut.....	1

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FC290V-X FC290V-AS04

Ref.No.	Part No.	Part Name	Quantity						Remarks
			A						
1	11008-6002	CYLINDER HEAD COMP	1						Fig. A-1
2	49002-2075	•GUIDE, valve (IN)	1						
3	49002-2076	•GUIDE, valve (EX)	1						
4	92036-023	•RING, snap	2						
5	11004-2086	GASKET, head	1						
6	130T 0845	BOLT (8x45)	5						
7	11022-2054	CASE, rocker	1						
8	11009-2421	GASKET, rocker case	1						
9	130B0614	BOLT (6x14)	3						
10	11010-2248	AIR FILTER ASSY	1						
11	11009-2422	GASKET, air filter	1						
12	171G0690	STUD	1						
13	92015-2138	NUT	1						
14	92022-2204	WASHER	1						
15	49069-2161-9Y	MUFFLER ASSY	1						
16	49106-2387-9Y	•COVER, muffler	1						
17	11012-2232-9Y	•CAP	1						
18	18077-2087	•ARRESTER, spark	2						
19	92009-2166	•SCREW	8						
20	410B0500	•WASHER	4						
21	32069-2063-9Y	BRACKET, muffler	1						
22	184B0814	BOLT (8x14)	1						
23	184B0818	BOLT (8x18)	1						
24	315501-1442A	GASKET	1						
25	171G0816	STUD	2						
26	317R0800	NUT (8mm)	2						
27	461F0800	WASHER, spring	2						
28	12004-2084	VALVE, intake	1						
29	12005-2068	VALVE, exhaust	1						
30	49078-2060	SPRING, valve	2						
31	11012-2189	CAP, valve	1						
32	12009-2058	RETAINER, spring	1						
33	12009-2060	RETAINER, spring	1						
34	12011-2052	COLLET	2						
35	16007-2052	SEAT, spring	2						
36	92049-2100	SEAL, oil	2						
37	12016-2055	ARM, rocker	1						
38	12016-2054	ARM, rocker	1						
39	12020-2057	SHAFT, rocker	1						
40	92009-2182	SCREW	2						
41	92015-2139	NUT	2						
42	13116-2054	ROD, push	2						

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Ref.No.	Part No.	Part Name	Quantity					Remarks
			A					
43	12032-2060	TAPPET	2					
44	49118-2054	CAM SHAFT COMP	1					
45	92081-2297	●SPRING	1					
46	92025-2162	SHIM	AR					t=1.60
	92025-2163	SHIM	AR					t=1.65
	92025-2164	SHIM	AR					t=1.70
	92025-2165	SHIM	AR					t=1.75
	92025-2166	SHIM	AR					t=1.80
	92025-2167	SHIM	AR					t=1.85
	92025-2208	SHIM	AR					t=1.90
	92025-2209	SHIM	AR					t=1.95
47	13001-2089	PISTON	1					S.T.D
	13029-2080	PISTON	AR					O/S 0.25mm
	13029-2081	PISTON	AR					O/S 0.50mm
	13027-2055	PISTON	AR					O/S 0.75mm
48	13008-6007	PISTON RING SET	1					S.T.D
	13025-2073	PISTON RING SET	AR					O/S 0.25mm
	13025-2074	PISTON RING SET	AR					O/S 0.50mm
	13024-2051	PISTON RING SET	AR					O/S 0.75mm
49	13002-2069	PIN, piston	1					
50	92036-008	RING, snap	2					
51	13037-2269	SHAFT, crank	1					
52	59051-2097	GEAR, spur	1					
53	59056-2088	GEAR, helical	1					
54	92038-2074	KEY	1					
55	92002-2263	BOLT	1					
56	92022-2194	WASHER	1					
57	13251-6009	CONNECTING ROD ASSY	1					S.T.D
	13251-6016	CONNECTING ROD ASSY	AR					U/S 0.50mm
58	315601-3245A	●BOLT, connecting rod	2					
59	92026-2052	SPACER	1					
60	92025-2168	SHIM	AR					t=1.13
	92025-2169	SHIM	AR					t=1.18
	92025-2170	SHIM	AR					t=1.23
	92025-2171	SHIM	AR					t=1.28
	92025-2172	SHIM	AR					t=1.33
	92025-2173	SHIM	AR					t=1.38
	92025-2174	SHIM	AR					t=1.43
	92025-2175	SHIM	AR					t=1.48
	92025-2207	SHIM	AR					t=1.53
61	49120-2138	CRANK CASE COMP	1					
62	92043-2111	PIN	2					

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Ref.No.	Part No.	Part Name	Quantity					Remarks
			A					
63	92043-1037	PIN	2					Fig. C-1
64	92004-2083	STUD	4					
65	16126-2107	VALVE	1					
66	13169-2414	PLATE	1					
67	315801-6732A	SCREW	1					
68	410B0500	WASHER	1					
69	601A6306	BEARING, ball (6306)	1					
70	316470-4231-00	SEAL, oil	1					
71	92049-2097	SEAL, oil	1					
72	15001-2634	CARBURETOR ASSY	1					
73	16073-2095	INSULATOR	1					
74	11009-2423	GASKET	1					
75	11009-2424	GASKET	1					
76	16060-2113	PIPE, intake	1					
77	11009-2425	GASKET	1					
78	92004-2093	STUD	2					
79	92015-1193	NUT	2					
80	92059-2170	TUBE, breather	1					
81	92037-1104	CLAMP	1					
82	49088-2295-YK	RECOIL STARTER ASSY	1					Fig. R-1
83	49080-2133	PULLEY	1					
84	130B0610	BOLT (6x10)	4					
85	130G0645	BOLT (6x45)	3					
86	21187-2051	ARM ASSY	1					
87	92002-2269	BOLT	1					
88	311B0600	NUT (6mm)	1					
89	411B0600	WASHER	1					
90	16171-2051	LINK, governor	1					
91	92081-2299	SPRING, link	1					
92	16169-2077	LINK, choke	1					
93	49113-2065	CONTROL PANEL ASSY	1					
94	214B0425	•SCREW (4x25)	1					
95	310701-1225A	•BOLT	1					
96	92037-2020	•CLAMP	1					
97	314401-5321B	•SPRING	1					
98	92081-2316	•SPRING	1					
99	112B0630	BOLT (6x30)	1					
100	112B0655	BOLT (6x55)	1					
101	461F0600A	WASHER, spring	2					
102	311509-3595-00	WASHER	2					
103	92027-2088	COLLAR	1					
104	92027-2089	COLLAR	1					

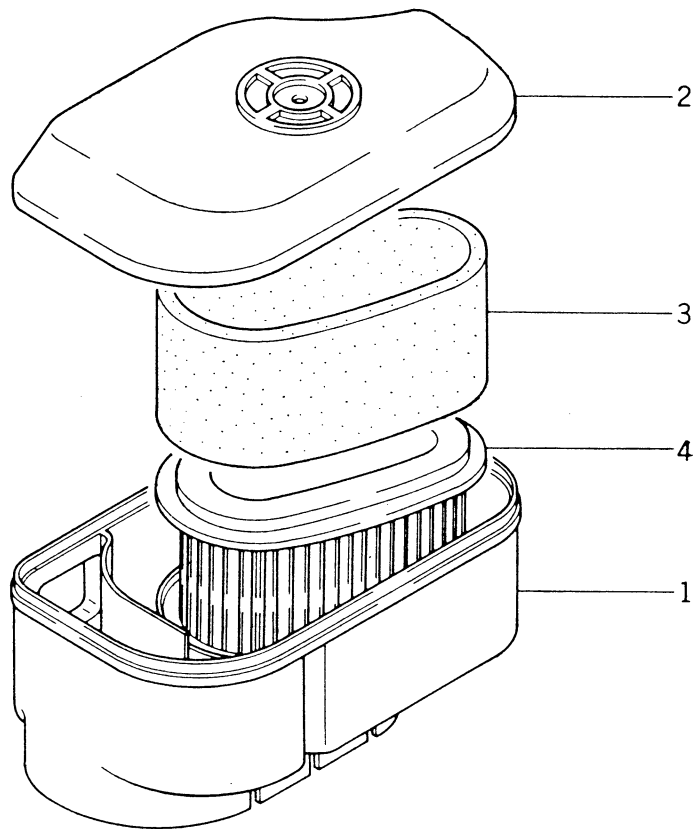
FC290V-X FC290V-AS04

Ref.No.	Part No.	Part Name	Quantity					Remarks
			A					
105	92081-2300	SPRING	1					
106	13042-6003	WEIGHT COMP	1					
107	13107-2088	SHAFT	1					
108	92055-2072	O-RING	1					
109	92015-1193	NUT	4					
110	46102-6003	ROD ASSY	2					
111	92141-2090	●BEARING, plain	2					
112	49015-6008	CRANK CASE COVER COMP	1					
113	92141-2091	●BEARING, plane	1					
114	11009-2426	GASKET	1					
115	130T0845	BOLT (8x45)	8					
116	130G0825	BOLT (8x25)	4					
117	49073-2053	SLINGER, oil	1					
118	13107-2089	SHAFT	1					
119	3145V1-7283A	WASHER	1					
120	187B0512	BOLT (5x12)	1					
121	3145V1-7281A	WASHER	1					
122	92049-2101	SEAL, oil	1					
123	49110-2069	GOVERNOR ASSY	1					
124	42036-2060	SLEEVE, governor	1					
125	39003-2063	ARM, pivot	1					
126	410B0600	WASHER	1					
127	554A0600	PIN, snap	1					
128	92022-2135	WASHER	1					
129	92022-2222	WASHER	1					
130	52005-2064	GAUGE, oil	1					
131	59231-2061	FILLER	1					
132	11009-2346	GASKET	1					
133	670D2016	O-RING	1					
134	92066-2097	PLUG, drain	1					
135	21194-2160	FLYWHEEL COMP	1					
136	21121-2058	COIL, ignition	1					
137	130B0520	BOLT (5x20)	2					
138	21119-2101	IGNITER	1					
139	26011-2104	WIRE, lead	1					
140	224B0408	SCREW (4x8)	1					
141	92037-2177	CLAMP	1					
142	315801-6732A	SCREW	1					
143	92071-2112	GROMMET	1					
144	92071-2099	GROMMET	1					
145	510A5100	KEY	1					
146	314G1600A	NUT (16mm)	1					

FC290V-X FC290V-AS04

Ref.No.	Part No.	Part Name	Quantity					Remarks
			A					
147	92022-2205	WASHER	1					
148	92070-2075	PLUG, spark	1					
149	21130-2060	CAP, plug	1					
150	59066-2359-9H	HOUSING, fan	1					
151	59066-2278-9H	HOUSING, fan	1					
152	49089-2188-9H	SHROUD	1					
153	49089-2189-9H	SHROUD	1					
154	49089-2246-9H	SHROUD	1					
155	130G0612	BOLT (6x12)	13					
156	11044-2073	BRACKET	1					
157	14037-2090-9H	SCREEN	1					
158	92025-2176	SHIM	AR					t=1.2
159	14024-2056	COVER	1					
160	56038-2391	LABEL, brand	1					★★
161	56031-2191	LABEL, manual	1					★★
162	56031-2269	LABEL, manual	1					★★

Fig. A-1 AIR FILTER
FC290V-X FC290V-AS04



Ref.No.	Part No.	Part Name	Quantity						Remarks
			A						
	11010-2248	AIR FILTER ASSY	1						
A-1- 1	11011-2152	•CASE, air filter	1						
A-1- 2	11012-2183	•CAP, air filter	1						
A-1- 3	11013-2092	•ELEMENT	1						
A-1- 4	11013-2093	•ELEMENT	1						

This technical drawing is an exploded view of a mechanical assembly, likely a carburetor or fuel valve. The central component is a complex casting (1) with various ports and mounting points. Surrounding it are numerous sub-components, each labeled with a number from 1 to 31. The assembly includes a fuel inlet at the top (11, 13, 14), a float mechanism (1, 2, 3, 4, 5, 6), a needle valve assembly (17, 18, 19, 20, 21), a needle (23), a needle seat (22), a bowl (24, 25), and a base (28, 29). Springs (7, 8, 10, 30, 31) and various fasteners (screws, bolts) are also shown in their relative positions to the main assembly.

Fig. C-1 CARBURETOR
FC290V-X FC290V-AS04

Ref.No.	Part No.	Part Name	Quantity					Remarks
			A					
	15001-2634	CARBURETOR ASSY	1					
C-1- 1	16041-2129	•SHAFT, choke	1					
C-1- 2	92027-2087	•COLLAR	1					
C-1- 3	92081-2303	•SPRING	1					
C-1- 4	16126-2112	•VALVE, choke	1					
C-1- 5	314572-6137A	•SCREW	2					
C-1- 6	314598-6138A	•RING	1					
C-1- 7	317290-6112-00	•JET, pilot (#50)	1					
C-1- 8	214B0412A	•SCREW (4x12)	1					
C-1- 9	16014-2057	•SCREW, adjuster	1					
C-1-10	313122-6116-00	•SPRING	2					
C-1-11	16041-2130	•SHAFT, throttle	1					
C-1-12	316626-6206A	•SEAL	1					
C-1-13	16025-2090	•VALVE, throttle (#110)	1					
C-1-14	316550-6137A	•SCREW	2					
C-1-15	16035-2060	•JET, air (#1.7)	1					
C-1-16	315825-6113A	•JET, pilot air (#1.1)	1					
C-1-17	16030-2067	•VALVE, needle	1					
C-1-18	314595-6134A	•CLIP	1					
C-1-19	49121-2086	•NOZZLE, main (#12C)	1					
C-1-20	49123-2053	•PIPE, bleed	1					
C-1-21	92063-2114	•JET, main (#97.5)	1					
C-1-22	315801-6126A	•FLOAT	1					
C-1-23	314499-6127A	•PIN, float	1					
C-1-24	313650-6128-00	•GASKET	1					
C-1-25	16020-2051	•FLOAT CHAMBER ASSY	1					
C-1-26	315470-6133A	••SCREW, drain	1					
C-1-27	313122-6116-00	••SPRING	1					
C-1-28	314486-6143A	•BOLT	1					
C-1-29	318190-6159-00	•WASHER	1					
C-1-30	92027-2025	•COLLAR	1					
C-1-31	92144-2002	•SPRING	1					

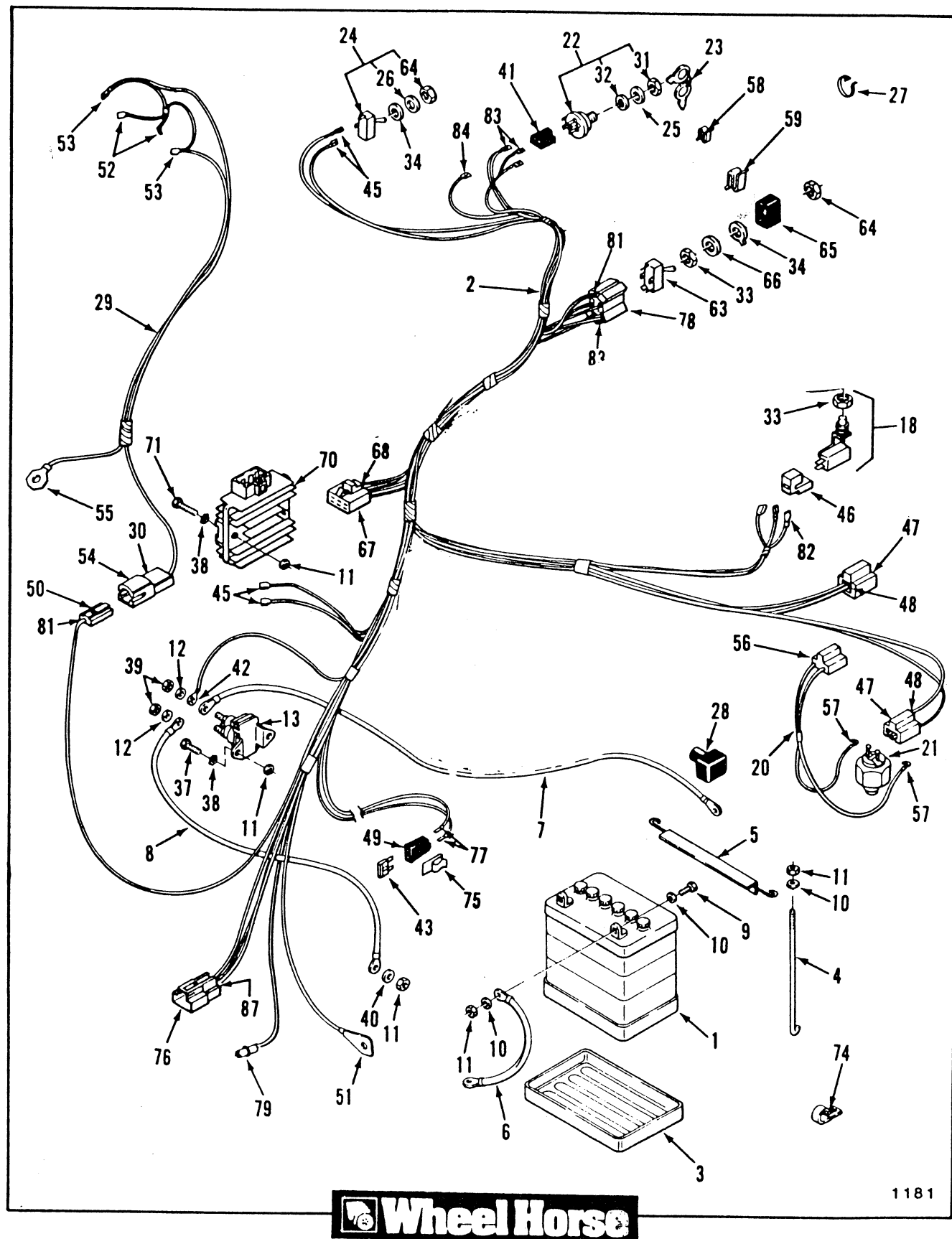


Figure 11-1 Electrical System

ITEM	PART NUMBER	DESCRIPTION	Quantity
		Figure 11-1 ELECTRICAL SYSTEM	
1	104962	Battery - 24 amp hour.....	1
2	113880	Wiring Harness 210-4.....	1
	113718	Wiring Harness 212-5.....	1
3	110298	Battery Tray.....	1
4	109547	Hook.....	2
5	113010	Battery Angle.....	1
6	111078	Wire (10").....	X
7	111076	Wire (14").....	X
8	111682	Wire (17.5").....	X
9	908003	Bolt 1/4-20 x 3/4.....	2
10	920007	Washer 1/4 SAE.....	6
11	915111	Nut 1/4-20.....	7
12	920081	Lockwasher 1/4 210-4 Only.....	2
13	110167	Solenoid (Includes two of item 11) 210-4.....	1
18	114240	Seat Switch.....	1
20	111364	Wiring Harness - Transmission Neutral Switch.....	1
21	111365	Transmission Neutral Switch.....	1
22	111215	Ignition Switch (Includes Items 31 & 32).....	1
23	111220	Ignition Key (set of 2).....	1
24	102138	Light Switch (includes items 33 & 34).....	1
25	920262	Special Washer.....	1
26	920259	Special Washer.....	1
27	100571	Cable Tie.....	1
28	109553	Battery Terminal Cover.....	2
29	113140	Headlight Harness.....	1
31	101884	Switch Nut.....	1
32	920160	Internal Tooth Lockwasher.....	1
33	105805	Special Nut.....	2
34	102950	Tab Washer.....	2
37	960155	Whizlock Hex Hd Cap Screw 1/4-20x1 210-4.....	4
38	920122	External Tooth Lockwasher 1/4.....	4
39	915234	Hex Jam Nut 1/4-20 210-4.....	2
40	920081	Lockwasher 1/4.....	2
41	105302	5-Terminal Connector (part of item 2).....	1
42	113127	Ring Terminal (part of item 2) 210-4.....	1
43	109355	15 amp ATO Fuse.....	1
	109102	25 Amp ATO Fuse.....	1
45	113088	Connector .250 x .032.....	2
46	111498	Connector Body (part of item 2).....	1
47	109357	2-Terminal Connector (part of item 2).....	2
48	113131	Long Male Terminal .250 x .052.....	1
49	113133	Fuse Holder.....	2

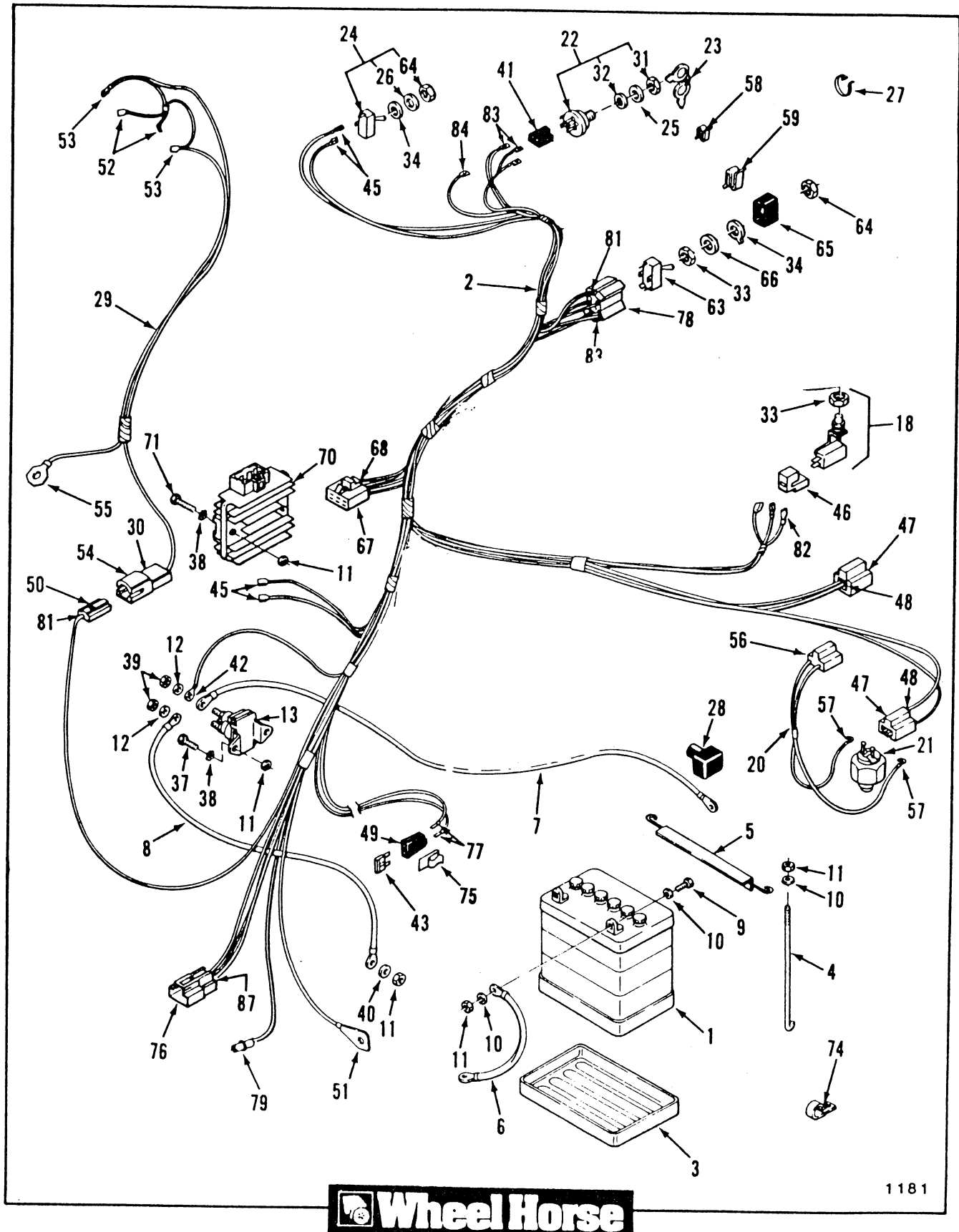


Figure 11-1 Electrical System

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 11-1 ELECTRICAL SYSTEM (CONT'D)			
50	104926	Connector Body.....	2
51	113128	Ring Terminal.....	1
52	113206	Female Terminal .250 (part of item 29).....	2
53	113308	Female Dbl. Crimp terminal (part of item 29).....	2
54	105312	Long Male Spade Terminal part of item 2 & 29)....	4
55	113127	Ring Terminal 5/16 (part of item 29).....	1
56	110459	Connector Body (part of item 20).....	1
57	105306	Female Terminals (part of item 20).....	2
58	8830	Clip.....	1
59	3023	CLip.....	6
63	113178	Electric Clutch Switch (includes items 33,34 & 64)	1
64	113179	Face Nut.....	2
65	113050	PTO Switch Cover.....	1
66	920242	Spacer.....	1
67	112192	Connector Body (part of item 2).....	1
68	112360	Terminal (part of item 2).....	1
70	KW10083	Voltage Regulator.....	1
71	960155	Whizlock Bolt 1/4-20 x 1/2.....	2
74	105490	Clamp.....	1
75	109445	Fuse Holder Mounting Clip 210-4.....	1
	112364	Fuse Holder Mounting Clip 212-5.....	1
76	112362	3 Contact Lock Type Connector (part of 2).....	1
77	113170	Fuse Holder Term.....	1
	113171	Fuse Holder Terminal	3
78	105303	5 Terminal Connector.....	1
79	518075	Socket Connector.....	1
81	113090	Tab Receptacle .250 x .030.....	1
82	113124	Tab Receptacle .187 x .020.....	3
83	113206	Tab Receptacle .250 x .032.....	4
84	113172	Tab Receptacle .250 x .035.....	1
87	113132	Long Male Terminal .248 x .032.....	3

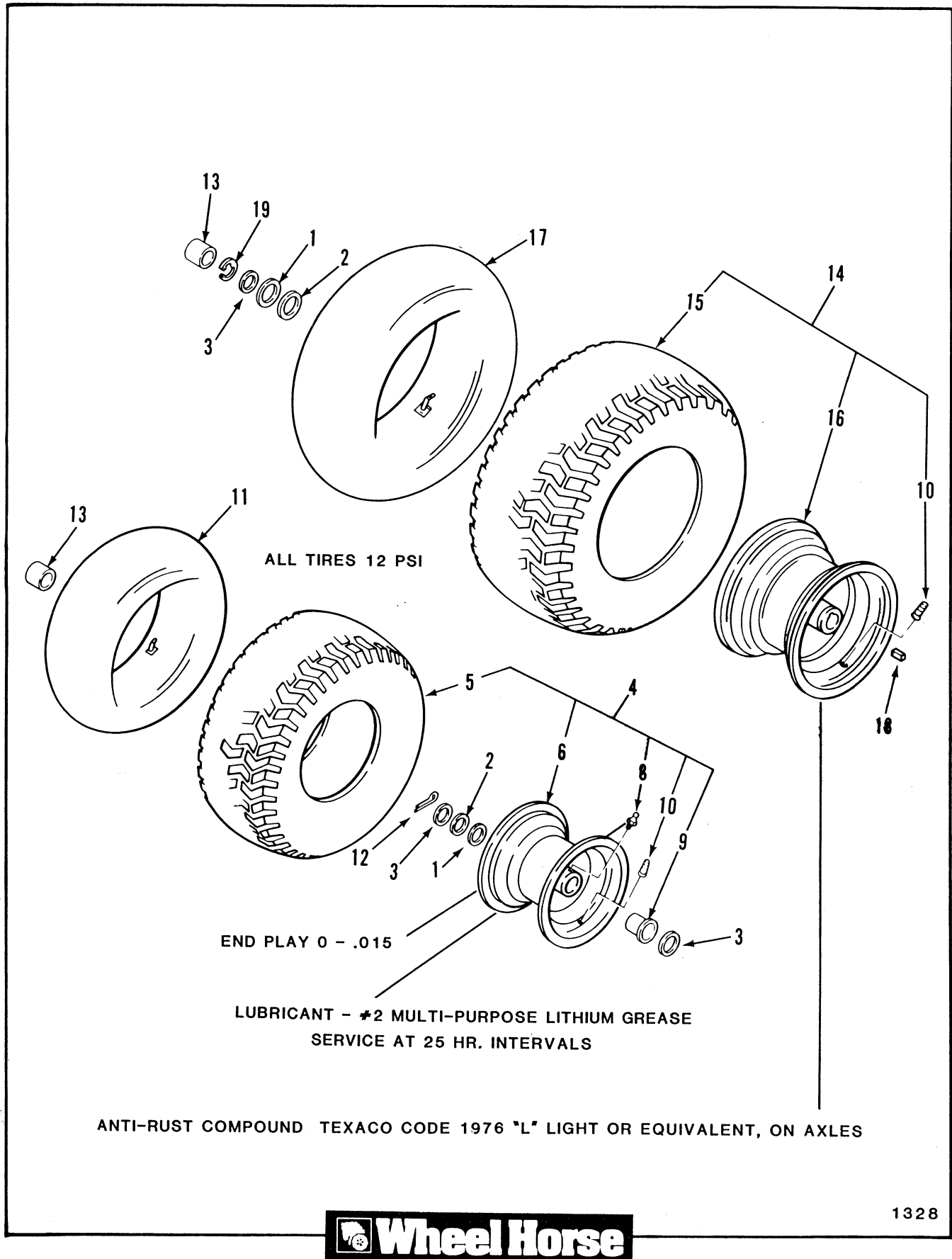
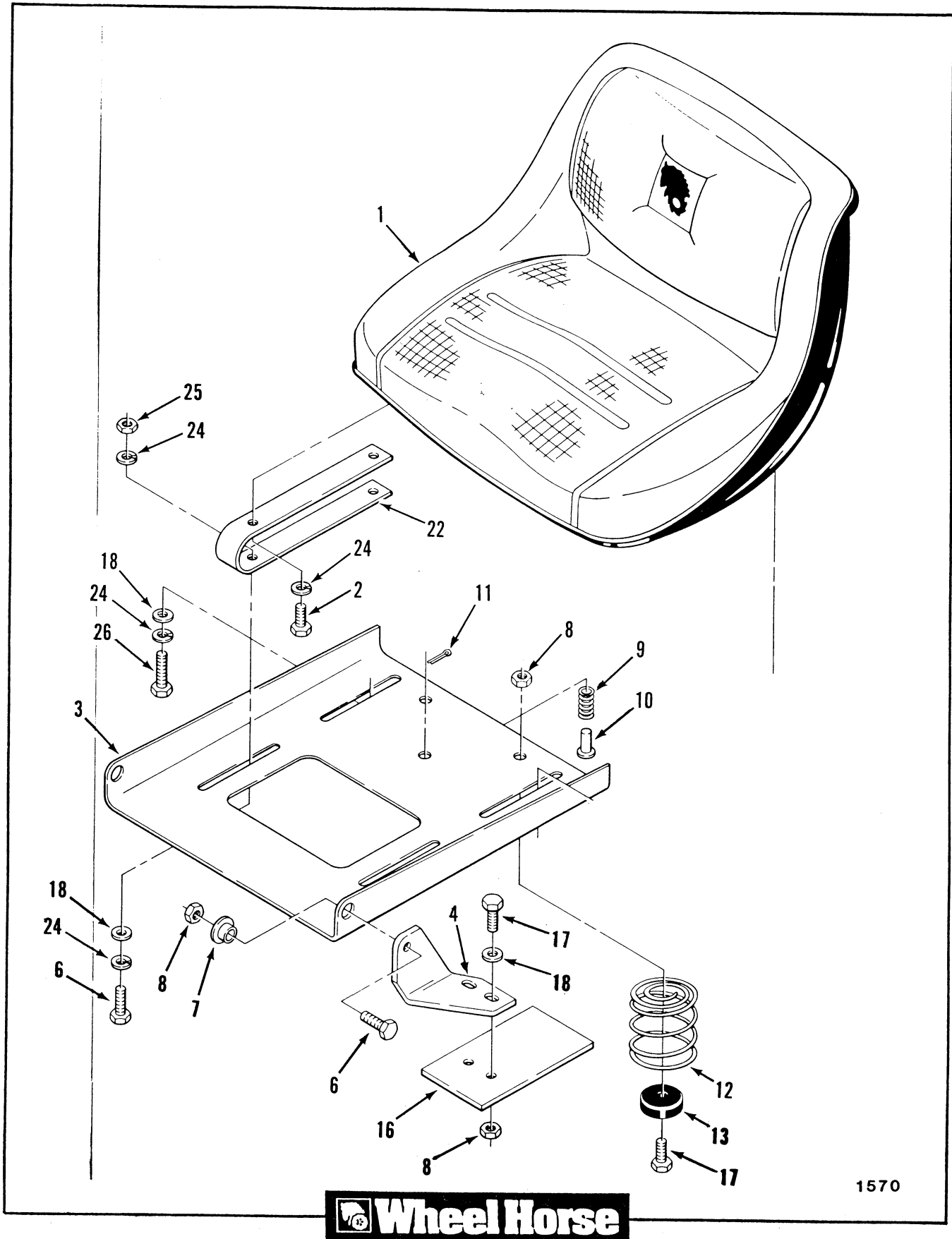


Figure 13-1 Wheels and Tires

ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 13-1 WHEELS AND TIRES			
1	5210	Shim Washer .015.....	X
2	1278	Shim Washer .050.....	X
3	109262	Special Washer Hubcap 1 5/16 OD.....	4
4	114015	Front Wheel and Tire 15 x 6.00-6 (includes items 6, 8, 9 & 10) 212-5.....	2
	113389	Front Wheel and Tire 15 x 6.00-6 (includes items 6, 8, 9 & 10) 210-4.....	2
5	8119	Front Tire 15 x 6.00-6.....	2
6	114014	Front Wheel Assy (includes Wheel w/items 8,9 & 10) 212-5.....	2
	113390	Front Wheel Assy (includes Wheel w/items 8,9 & 10) 210-4.....	2
8	109500	Grease Fitting.....	2
9	113342	Bearing.....	2
10	5108	Valve Stem.....	4
11	100079	Front Tube - Service Only.....	X
12	932026	Cotter Pin 5/32 x 1-1/4.....	2
13	109261	Hubcap - Black - Front.....	2
	109154	Hubcap - Black - Rear.....	2
14	112294	Rear Wheel and Tire 18 x 8.50-8 210-4.....	2
	112187	Rear Wheel and Tire 18 x 9.50-8 212-5.....	2
15	8191	Rear Tire 210-4.....	2
	105451	Rear Tire 212-5.....	2
16	111958	Rear Wheel 210-4.....	2
	112188	Rear Wheel 212-5.....	2
17	105450	Rear Tube - Service Only.....	X
18	1120	Square Key 3/16 x 1 3/4.....	2
19	104636	E-Ring.....	2



ITEM	PART NUMBER	DESCRIPTION	Quantity
Figure 15-1 SEAT AND SUSPENSION			
1	109342	Seat.....	1
2	908017	Bolt 5/16-18 x 3/4.....	4
3	113852	Seat Pivot Plate.....	1
4	112744	RH Pivot Bracket.....	1
	112745	LH Pivot Bracket.....	1
6	908018	Bolt 5/16-18 x 7/8.....	4
7	105503	Bushing.....	2
8	915662	E.S. Hex Nut 5/16-18.....	6
9	114267	Spring.....	2
10	106449	Pin.....	2
11	932008	Cotter Pin 3/32 x 3/4.....	2
12	114268	Spring - Lifter.....	2
13	108889	Bumper.....	2
16	112961	Plate 211-4.....	2
17	908019	Bolt 5/16-18 x 1.....	4
18	920008	Washer 5/16 SAE.....	6
22	112837	Seat Spring 208-5, 211-5 & 212-6.....	2
24	920082	Lockwasher 5/16 (8 used on 208-5, 211-5 & 212-6..	4
25	915112	Hex Nut 5/16-18 208-5, 211-5 & 212-6.....	4
26	908020	Bolt 5/16-18 x 1-1/4 208-5, 211-5 & 212-6.....	2
	114496	Nylon Spring - Not illustrated.....	2
	900214	Bolt 5/16-18 x 3/4 - Not illustrated.....	4
	920155	Lock Washer 5/16 - Not illustrated.....	4

SECTION 15 - SEAT AND DECALS

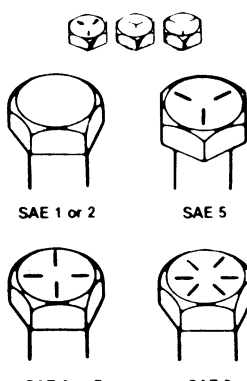
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ITEM	PART NUMBER	DESCRIPTION	Quantity
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Figure 15-2
DECALS, MISCELLANEOUS

1	114118	Decal - Hood RH 210-4.....	X
	113310	Decal - Hood RH 212-5.....	X
2	114119	Decal - Hood LH 210-4.....	X
	113311	Decal - Hood LH 212-5.....	X
3	111784	Decal - Rear Hood.....	1
4	111327	Decal - Parking Brake.....	1
5	112845	Decal - PTO Clutch.....	1
10	110629	Decal - Rear Fender.....	1
11	111699	Decal - Front Hood.....	1
12		Owner's Manuel-Tractor.....	X
13	807163	New Tractor Loose Parts Package 210-4.....	X
	807162	New Tractor Loose Parts Package 212-5.....	X
14	111632	Decal - Clutch & Brake.....	1
19	111926	Decal - Electrical System.....	1
20	111193	Decal - Maintenance.....	1
21	111706	Decal - Throttle.....	1
22	112924	Decal - Back Plate.....	1
23	112384	Decal - Hood Stripe RH.....	1
	112385	Decal - Hood Stripe LH.....	1
24	112670	Decal - Danger.....	1
25	112926	Decal - Shift 4 Speed.....	1
26	112927	Decal - Shift 5 Speed.....	1
29	112403	Decal - VIN overlay.....	1
30	113370	Decal - PTO Adjustment.....	1
	111342	Decal - Europa Not illustrated.....	2
	114297	Decal - Seat Lifter Not illustrated.....	1

TORQUE SPECIFICATIONS

BOLT HEAD MARKINGS	BOLT BODY SIZE In. - Thread	SAE GRADE 1 or 2		SAE GRADE 5		SAE GRADE 6 or 7		SAE GRADE 8	
		Torque		Torque		Torque		Torque	
		Ft-Lb	Nm	Ft-Lb	Nm	Ft-Lb	Nm	Ft-Lb	Nm
Manufacturer's marks may vary. Three-line markings on heads shown below, for example, indicate SAE Grade 5.  SAE 1 or 2 SAE 5 SAE 6 or 7 SAE 8	1/4-20 -28	5 6	6.8 8.1	8 10	10.8 13.6	10	13.6	12 14	16.2 19.0
	5/16-18 -24	11 13	15.0 17.6	17 19	23.0 25.8	19	25.8	24 27	32.5 36.6
	3/8-16 -24	18 20	24.4 27.1	31 35	42.0 47.5	34	46.1	44 49	59.7 66.4
	7/16-14 -20	28 30	38.0 40.7	49 55	66.4 74.6	55	74.6	70 78	95.0 105.8
	1/2-13 -20	39 41	52.9 55.6	75 85	101.7 115.2	85	115.2	105 120	142.4 162.7
	9/16-12 -18	51 55	69.1 74.6	110 120	149.1 162.7	120	162.7	155 170	210.1 230.5
	5/8-11 -18	83 95	112.5 128.8	150 170	203.3 230.5	167	226.4	210 240	284.7 325.4
	3/4-10 -16	105 115	142.4 155.9	270 295	366.1 400.0	280	379.6	375 420	508.4 569.4
	7/8- 9 -14	160 175	216.9 237.3	395 435	535.5 589.8	440	596.6	605 675	820.3 915.2
	1- 8 -14	235 250	318.7 339.0	590 660	799.9 894.8	660	894.8	910 990	1233.8 1342.2

FUEL LINE

50' bulk fuel line ID .250 x OD .550 — #112570

FASTENERS

- All hex bolts GRADE 5 minimum, GRADE 8 used as noted.
- All carriage bolts GRADE 1 unless otherwise noted.
- In place of ESLOK or E.S. nuts, use LOCTITE or lock washers with free running nuts.

PAINT

Red Enamel — 6 cans, order #8-0311

Red Enamel — Quart can #5340 (Non-aerosol) *

Beige Enamel — 6 cans, order #8-0321

Black Enamel — 6 cans, order #8-0334

Pewter Metallic Enamel — 6 cans, order #8-0335

(Automotive Equivalent: 1971 Lincoln-Mercury Pewter Metallic)

White Enamel — 6 cans, order #8-0336

Pewter Gray Enamel — 6 cans, order #8-0337

(Automotive Equivalent: 1982 Lincoln Light Pewter)

Silver Metallic Enamel — 6 cans, order #8-0338

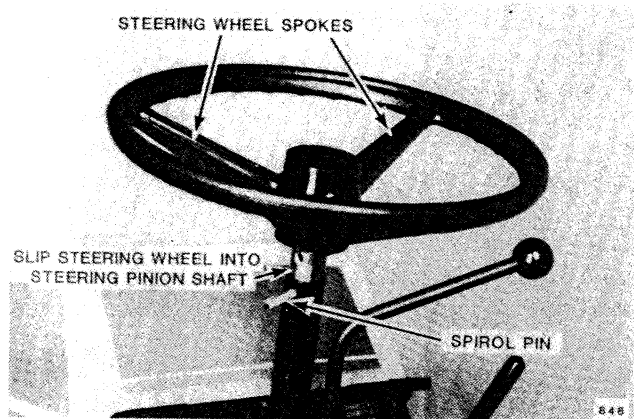
Pewter Gray Enamel — Quart can #5347 (Non-aerosol) **

* Thinning — use zylol (slow drying time) or toluol (fast drying time)

** Thin with zylol

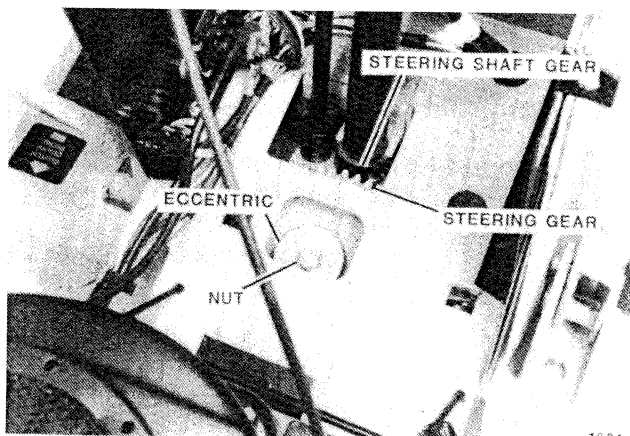
MOUNTING STEERING WHEEL

- o With wheel straight ahead, install steering wheel so spokes form a "Y" (3-Spokes), or so spokes extend outward left and right (2-Spokes). See "STEERING GEAR TOOTH ADJUSTMENT" to align as necessary.
- o Line up hole in wheel hub with hole in steering column.
- o Insert punch through hole to hold steering wheel in position. Drive spirol pin in with a hammer. As spirol pin is driven in, it will push punch out.
- o Install "Horse Head" insert so head is upright when the steering wheel spokes are aligned.



STEERING GEAR TOOTH ADJUSTMENT

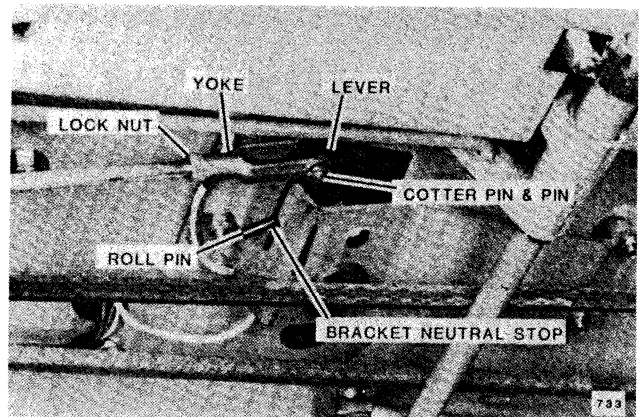
- o Remove fuel tank and battery.
- o With steering wheel installed, loosen eccentric nut and align steering shaft gear in steering gear so that spokes of steering wheel are positioned as outlined lined above. Make sure front wheels are pointing straight forward. Tighten nut until eccentric turns with small amount of friction.



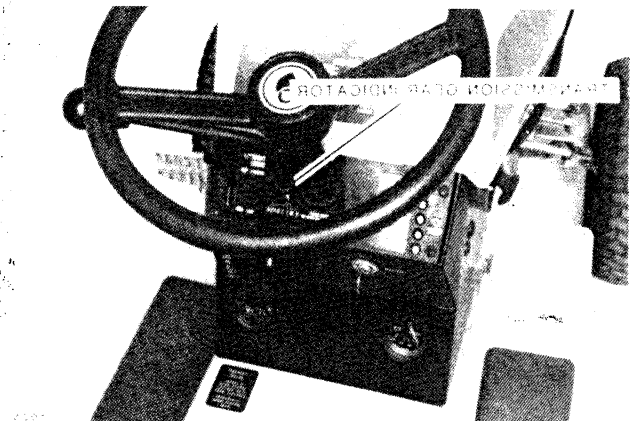
- o Turn eccentric clockwise until zero clearance is obtained between end of gear tooth and steering shaft gear.
- o Torque nut to 25 - 35 ft. lbs. DO NOT OVERTIGHTEN.
- o Turn wheels left and right rechecking for proper gear mesh.
- o Reinstall battery and fuel tank.

GEAR SHIFT LEVER ADJUSTMENT

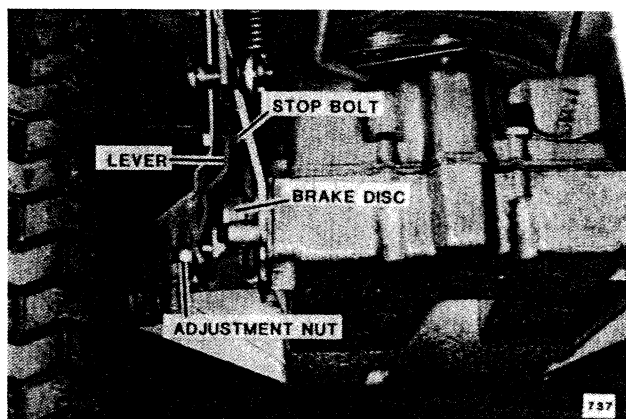
- o Position transmission in neutral.
- o Remove cotter pin and pin from adjustment yoke.



- o Position gear shift lever roll pin in bracket neutral stop.
- o Loosen lock nut on control rod and adjust yoke and lever without force. Retighten lock nut and install cotter pin.
- o Position indicator on control handle at neutral marking. Move indicator up on control handle to clear console when handle is pushed down for reverse.

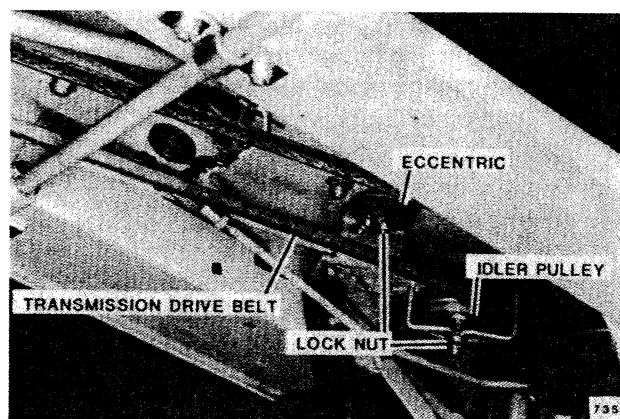
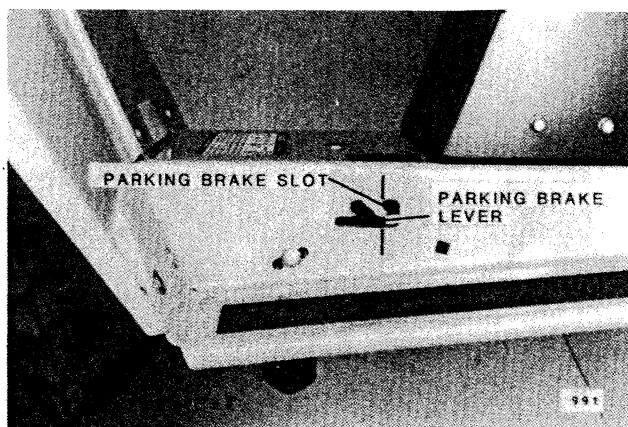


BRAKE ADJUSTMENT



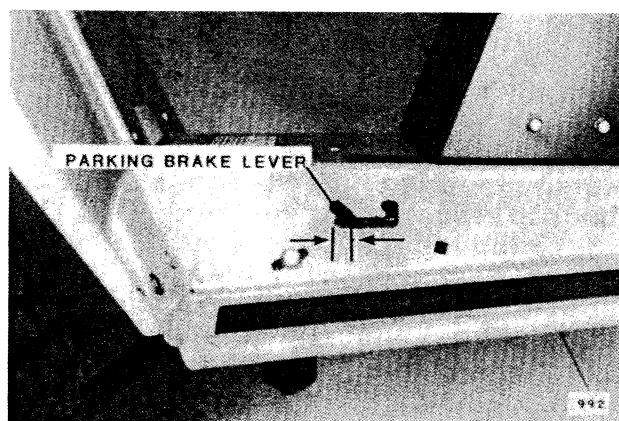
Brake adjustment is made at brake caliper. Block wheels to prevent tractor from rolling and place transmission shift lever in Neutral for brake adjustment.

- o Check that trans. brake lever is contacting bolt when brake pedal is released. If it does not, brake pads will drag on disc while tractor is being operated. If applicable, adjust clutch/brake rod.
- o With clutch/brake pedal released, loosen or tighten adjustment nut until brake disc is no longer free to turn. Back off adjustment nut just enough to permit disc to turn freely.
- o When brake pedal is depressed, brake should be locked when front edge of parking brake lever is even with rear edge of parking brake locking slot in frame. To adjust, rotate eccentric on idler arm underneath tractor.



CLUTCH ADJUSTMENT

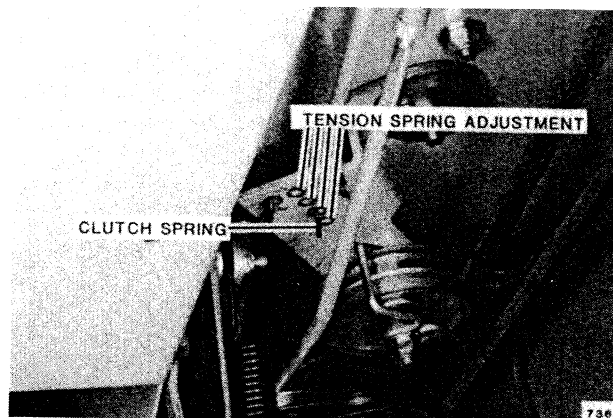
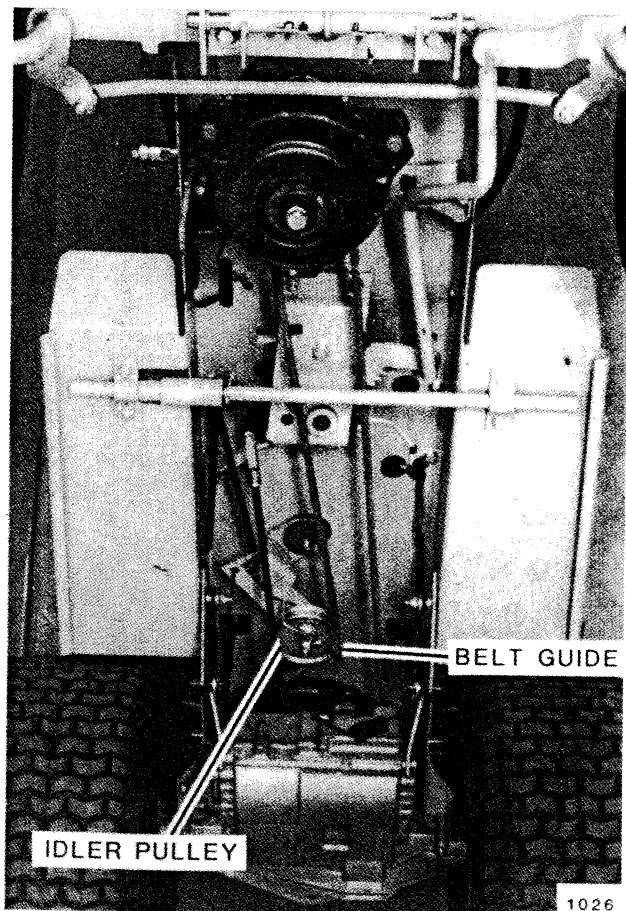
- o Stop engine and remove ignition key.
- o With clutch/brake pedal released parking brake lever should be 3/4 from end of slot. To adjust, perform brake adjustment as outlined under "Brake Adjustment". Loosen nut on idler pulley and slide idler pulley in or out of slot on bellcrank to achieve dimension and retighten.



DRIVE BELT REPLACEMENT

3, 4 & 5 SPEED TRANSMISSIONS

- o Engage and set parking brake.
- o Loosen idler pulley on pivot arm.
- o Work belt past idler belt guide.
- o Work belt off engine pulley and electric clutch.
- o Work belt off transmission pulley.
- o Remove belt.



PTO CLUTCH AND BRAKE ADJUSTMENT

PTO clutch and brake must be adjusted every 100 hours due to normal wear of friction surfaces.

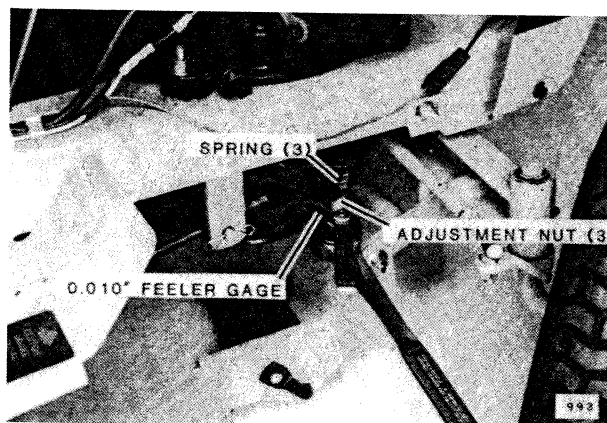
To adjust PTO Clutch/Brake:

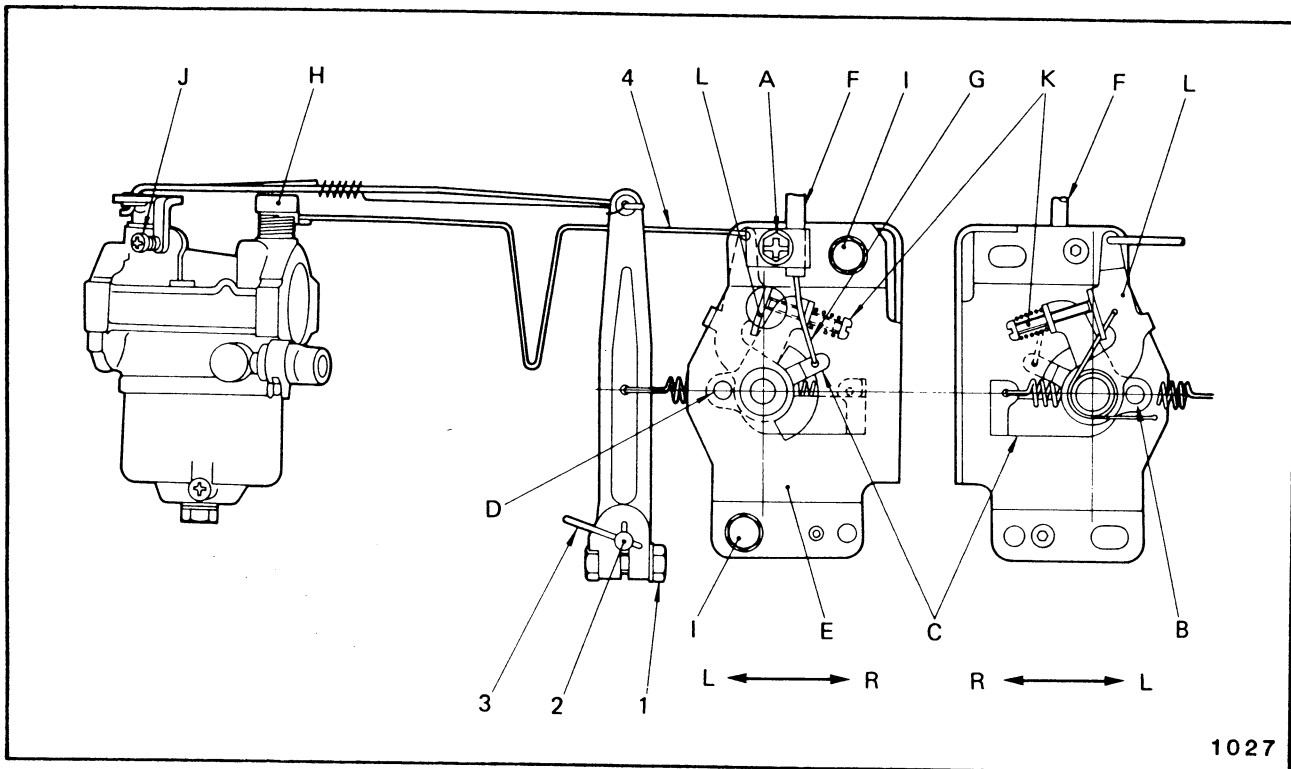
- o Stop engine and remove ignition key.
- o Clutch has three springs and adjustment nuts, all three must be adjusted equally.
- o Insert a .010" feeler gauge into air gap inspection slots (3). Adjust nuts (3) until a small amount of resistance is felt on feeler gauge.

- o Install new belt following above procedure in reverse order. After installing new belt follow procedures outlined in "CLUTCH ROD ADJUSTMENT", "BRAKE ROD ADJUSTMENT" and "DRIVE BELT TENSION ADJUSTMENT" sections.

DRIVE BELT TENSION ADJUSTMENT

Reposition belt tension spring in different hole until clutch engages firmly without grabbing and moves tractor without belt slipping.





1027

- | | |
|--------------------------------|-------------------------|
| A - Cable Clamp Bolt | B - Hole |
| C - Speed Control Plate | D - Hole |
| E - Base Plate | F - Outer Housing |
| G - Inner Cable | H - Choke Valve |
| I - Base Plate Tightening Bolt | J - Throttle Stop Screw |
| K - Choke Setting Screw | L - Lever |

GOVERNOR LINKAGE ADJUSTMENT

- o Place throttle lever on dash in "FAST" position.
- o Loosen nut (1), that holds governor arm to governor shaft (2).
- o Turn governor shaft (2) clockwise to the end of travel by inserting needle (3) to shaft end hole and tighten nut (1).

NOTE: The throttle lever on the dash must be in "FAST" position. Speed control lever (C) should be in wide open throttle position (align hole B and D), but not enough to move choke link (4). If adjustment is necessary, loosen cable clamp bolt (A) and adjust cable.

- o Retighten clamp bolt (A).

THROTTLE CABLE INSTALLATION AND ADJUSTMENT

- o Leave clamp bolt (A) loose.

- o Align hole (B) of speed control lever (C) with hole (D) of base plate (E) moving the lever; insert a 6mm dia. pin (or a 6mm bolt) through the two holes.
- o Pull up outer housing (F) of throttle cable until the inner cable (G) has almost no slack, and tighten the cable clamp bolt.
- o Remove 6mm dia. pin.
- o Check that carb. choke valve (H) is closed completely when throttle lever is moved to "CHOKE" position. If not, follow procedures outlined in "CHOKE ADJUSTMENT" section.

ENGINE SPEED AND CHOKE ADJUSTMENTS

Start engine and allow to warm.

Maximum Speed

- o Align hole (B) of speed control lever (C) with hole (D) of base plate (E) by moving the lever; insert a 6mm dia. pin (or a 6mm bolt) through the two holes.



47 SECTION 18 - SERVICE INFORMATION

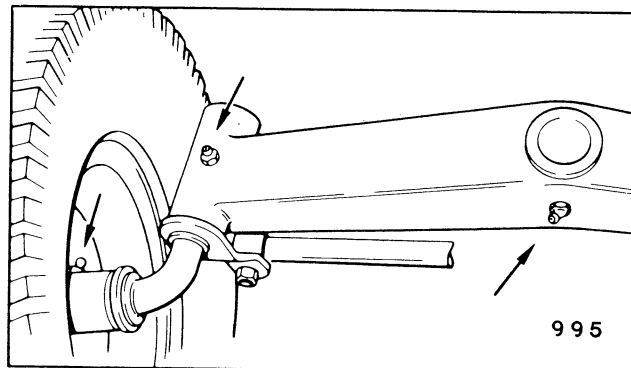
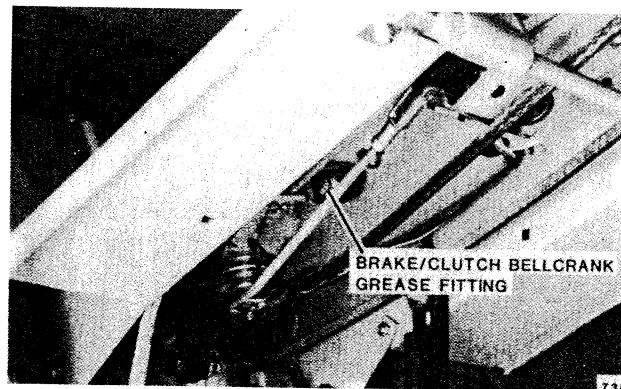
- o Leave two base plate tightening bolts (I) loose.
- o Slide base plate (E) horizontally to obtain specified ± 75 2800 rpm. Be sure that carb. choke valve is fully open.
- o Tighten two bolts (I) securely in a manner which will avoid changing the specified speed. Remove the 6mm dia. pin or bolt.

Idle Speed

- o Move throttle lever to farthest Idle position.
- o Turning throttle stop screw (J) in or out to obtain specified idling 1400 to 1550 rpm.

Choke Adjustment

- o Stop Engine.
- o Align hole (B) of speed control lever (C) with hole (D) of base plate (E) by moving the lever; insert a 6mm dia. pin (or a 6mm bolt) through the two holes.
- o Turn in choke setting screw (K) until its end just begins to touch tongue of lever (L). Remove the 6mm dia. pin or bolt.



CHASSIS LUBRICATION

- o Clutch/brake bellcrank, spindles, front wheel bearings and front axle pivot are equipped with grease fittings. Lubricate with #2 multi-purpose lithium base grease every 25 hours using a pressure grease gun.
- o Lubricate all other pivoting arms and levers with light machine oil or general purpose grease every 25 hours. Apply directly to wear surfaces.
- o Lubricate steering gears with #2 multi-purpose lithium base grease every 25 hours. Apply directly to wear surfaces.

