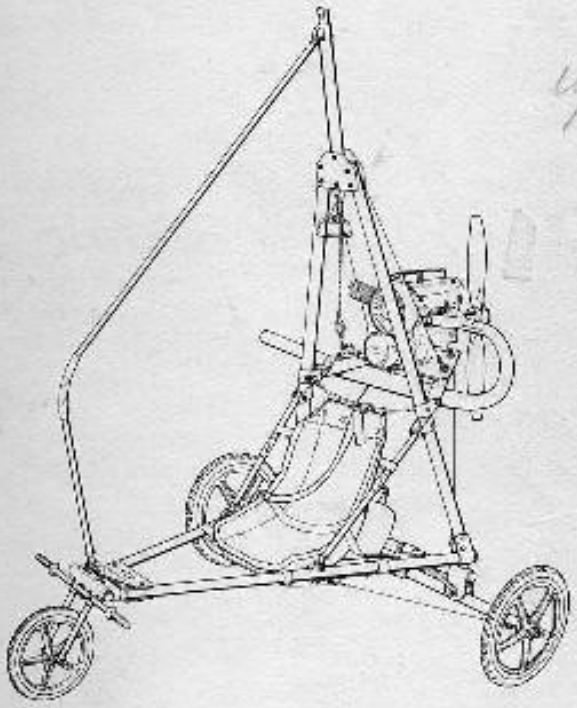
FLIGHT DESIGNS

OWNERS MANUAL



FOR

JETWING
ALL TERRAIN VEHICLE

PREFACE

Welcome to the Flight Designs organization. Having purchased your Jetwing ATV, you are no doubt eager to begin flying as soon as possible. However, a few minutes spent reading each set of assembly instructions prior to performing the operation will insure the easiest, most trouble free assembly of your ATV. Also, your local dealer stands ready to assist you in whatever way he can, up to and including completing the assembly and test flying of your new Jetwing ATV.

We at Flight Designs thank you for selecting our products. Please feel free to contact either your local dealer or the factory if you have any problems.

FLIGHT DESIGNS
OWNERS MANUAL

ATTENTION

IT IS STRONGLY RECOMMENDED THAT THE OWNER/OPERATOR BECOME THOROUGHLY FAMILIAR WITH THE CONTENTS OF THIS MANUAL PRIOR TO ASSEMBLY OR OPERATION OF THE ATV.

Flight Designs approves use of the Trike on its Demon, Javelin 208, and Super Lancer glider wings. Use of the Trike on other glider wings is not sanctioned by Flight Designs unless it provides written mounting instructions. Contact Flight Designs.

In all configurations, flight operating limitations are as follows:

a. No abrupt maneuvers. For training purposes and proficiency only, straight ahead power off stalls with recovery before the nose drops through the horizon are permissable. Power on stalls or recovery after the nose has fallen through the horizon are considered abrupt maneuvers.

b. Maximum angle of bank: 45 degrees.

c. No manuevers that would result in a G-loading of less than 0.5 positive or greater than 2.5 positive.

d. If turbulence is encountered to the degree that the above constraints are violated, proceed immediately to the nearest suitable and safe area and land.

November 1, 1982

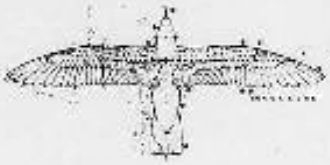


TABLE OF CONTENTS

INTRODUCTION

The instructions in this manual provide the information necessary to assemble/disassemble, perform simple checks, maintain and service the All Terrain Vechicle (ATV).

This manual consists of the following major sections:

INTRODUCTION
DESCRIPTION AND OPERATION
SAFETY
PROCEDURES
PARTS LIST

Reference the Table of Contents for the page numbers of the applicable section.

This manual will be updated as necessary to reflect current information. Revisions will not automatically be forwarded to holders of this document. Requests for revisions or additional copies of this manual should be addressed to:

Flight Designs, Inc.
P.O. Box 1503
Salinas, CA 93902
USA

-OR-

Pioneer International Corporation
P.O. Box 631
Manchester, CT 06040
USA

Warnings, Cautions and Notes

A WARNING statement will be used to call attention to a procedure, which if not strictly followed, could result in serious injury or death of personnel.

A CAUTION statement will be used to call attention to a procedure, which if not strictly followed, could result in damage to or destruction of equipment.

NOTES will be used to highlight procedural data.

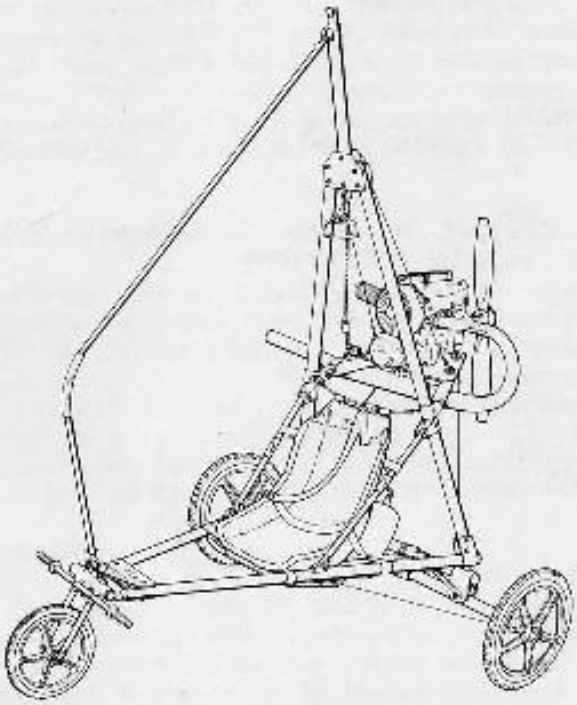
WARNING and CAUTION statements will immediately precede the text to which they apply. NOTES will immediately follow the text to which it applies.

All references to direction in this manual are relative to the individual sitting in the pilot's seat, looking forward.

DESCRIPTION AND OPERATION

1. Physical Description

The All Terrain Vehicle (ATV), illustrated in Figure 2-1, is designed, manufactured and distributed by Flight Designs Inc., a Division of Pioneer International Corporation.



All Terrain Vehicle
Figure 2-1

The ATV is constructed of aircraft-grade components. The engine, located behind and slightly above the pilot, is a two cylinder, two cycle, horizontal shaft. Attached to the end of the engine output shaft is a fixed pitch, two bladed wood propeller. The engine throttle control and ignition switch are secured to the hang glider's control bar for easy access.

The ATV is configured in a manner similar to that of a tricycle. It is supported by three wheels, two 20" diameter rear wheels and a 16" diameter nose wheel. The nose wheel is steerable. A 5 gallon fuel tank is located behind the pilot's seat. The fuel tank is secured to the ATV frame by a harness and sling assembly, allowing easy removal of the tank for filling and/or transportation.

The pilot is secured to the seat with an adjustable safety harness.

2. Leading Particulars

ATV Dry Weight	150 lbs
Demon Wing Weight	76.5 lbs
Javelin 208 Wing Weight	70 lbs
Super Lancer Wing Weight	65 lbs
Useful Load	255 lbs

Airspeed Limitations
Vne (Never Exceed Speed) — Trim Speed plus 10 MPH

Engine - Kawaski, Model No. TA 440A with CDI
30 rated HP @ 5500 RPM

Engine Operating Limitations	
Power and Speed	30BHP @ 5500 RPM
Normal Operating RPM	1500 - 5500 RPM
Maximum RPM	5500 RPM

Fuel Capacity: Total	
Standard Tank	5.0 gal

Overall Length	77 inches
Overall Width	65 inches
Overall Height	91 inches

Propeller:
Fixed Pitch -- 36" x 16

Servicing:
Fuel
Grade - Regular or Unleaded
Engine Oil - Torco GP-7 or any High Grade Synthetic Racing Oil. Mixing Ratio: 40:1
Tire Pressure
Nosewheel - 35-40 psi
Main Wheels 35-40 psi

3. System Physical Descriptions

A. Engine

The ATV is powered by a two cylinder, two cycle, horizontal shaft Kawaski engine rated at 30 horsepower.

Normal operating engine speed range is 1500-5500 RPM.

B. Fuel System

Fuel is supplied to the engine from a single 5 gallon fuel tank located behind the pilot's seat. The fuel system is primed by an in-line primer bulb. This provides fuel at the inlet to a diaphram operated fuel pump. The fuel pump sends fuel under pressure to the carburetor. Energy to operate the fuel pump is supplied by a vacuum line connected to the engine.

C. Electrical System

Electrical energy for engine ignition operation is provided by a capacitive discharge ignition (CDI) system integral to the engine.

The ignition switch, located on the throttle control, is a rotary style single pole switch. The center position (ON) enables the ignition for engine starting. The left or right position (OFF) disables the ignition.

D. Propeller

The propeller used on the ATV is a fixed pitch, two blade type utilized in a pusher configuration. It is attached directly to the output shaft of the engine. The propeller diameter is 36 inches and has a fixed pitch of 16 degrees. A larger, quieter propeller is available with the optional reduction system.

E. Safety Harness

The safety harness used in the ATV is a quick release type. It is an integral part of the seat. Safety harness length is adjustable.

F. Landing Gear

The tricycle landing gear contains a steerable nosewheel and utilizes shock cord for main gear shock absorption.

Nosewheel steering is accomplished by the pilot placing his feet on the crosstube attached to the nose wheel fork yoke.

G. Throttle Control

The throttle control is a spring actuated lever, which is attached to the hang glider's control bar. The kill switch is an integral part of the throttle control.

H. Accessories

The Jetwing ATV is available with the following accessories:

Parachute Recovery System
Reduction Drive System
Electric Start System
Strobe Light System
Instruments

I. Optional Configurations

The following option kits allow quick conversion of your ATV from one configuration to another:

Seaplane Kit
Airboat Kit
Go Cart Kit

Each option may be fitted in a matter of minutes.

SAFETY

1. General

The intention of this section is to provide some general information concerning the hazards one might encounter while operating the ATV. This section is not meant to inform the owner/operator of all aspects of safety, just the ones common to the ATV.

2. ATV Danger Areas

Special attention should be given to the following areas when the ATV is operating on the ground.

WARNING

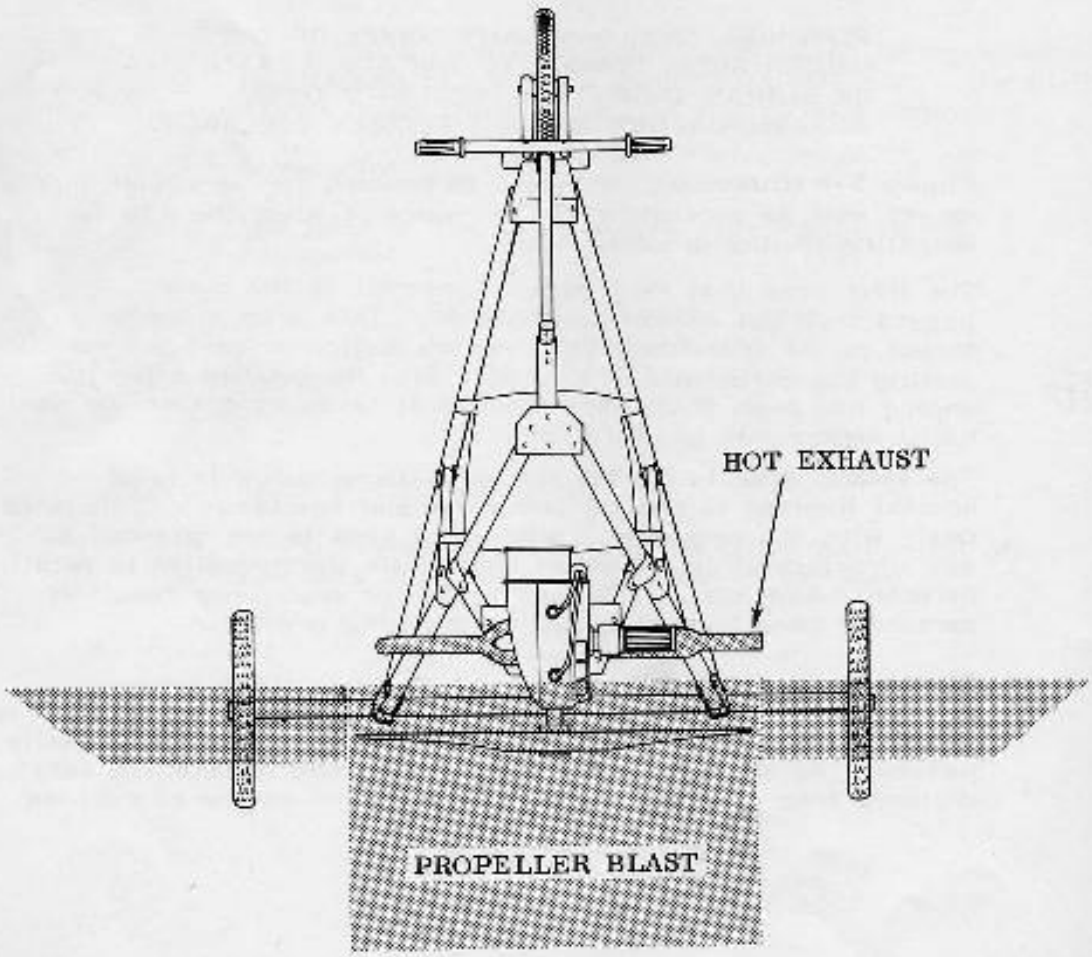
PERSONNEL SHOULD BE MADE AWARE OF THE DANGER AREAS COMMON TO THE ATV. DEATH OR SERIOUS INJURY MAY RESULT IF THESE RECOMMENDATIONS ARE NOT CLOSELY FOLLOWED.

Figure 3-1 illustrates the areas of concern for personnel (operator as well as spectators) to be aware of when the ATV is operating on the ground.

The first area that is of special interest is the burn hazard from hot exhaust components. This area presents a threat to the individual starting the engine or perhaps adjusting the carburetor. It should also be avoided after the engine has been shut down because it takes some time for exhaust components to cool.

The second area is by far the most dangerous. It is of special interest to ground personnel and spectators. This area deals with the propeller. Since this area is not guarded by any structure it is important that while the propeller is rotating personnel stay clear. Serious injury or death may result if personnel come in contact with a rotating propeller.

Blast from a rotating propeller is another hazard common to a propeller driven vehicle. The propeller has the capability to propel small objects at great speed, which creates a missile hazard. As a consequence, personnel should maintain a safe distance from the rear of the ATV when the engine is running.



ATV Danger Areas
Figure 3-1

ASSEMBLY-KIT

1. General

A. This section contains the procedures necessary to assemble the ATV from the kit parts. Figure 4-1 illustrates the assembled ATV and should be used for reference during assembly. Table 4-1 lists all of the parts used to assemble the ATV and references the figure they are illustrated in.

B. All references to direction used in the assembly procedures are relative to the individual sitting in the pilot's seat looking forward.

C. When assembling the ATV it is important to note that there are only a few situations where torque is required. All other fasteners (nuts, bolts) need only to be tightened securely. This means that when $1\frac{1}{2}$ to 3 threads are exposed and mating surfaces are in contact, the nut is properly secured. Any further tightening will damage ATV components.

D. The kit consists of three different containers:

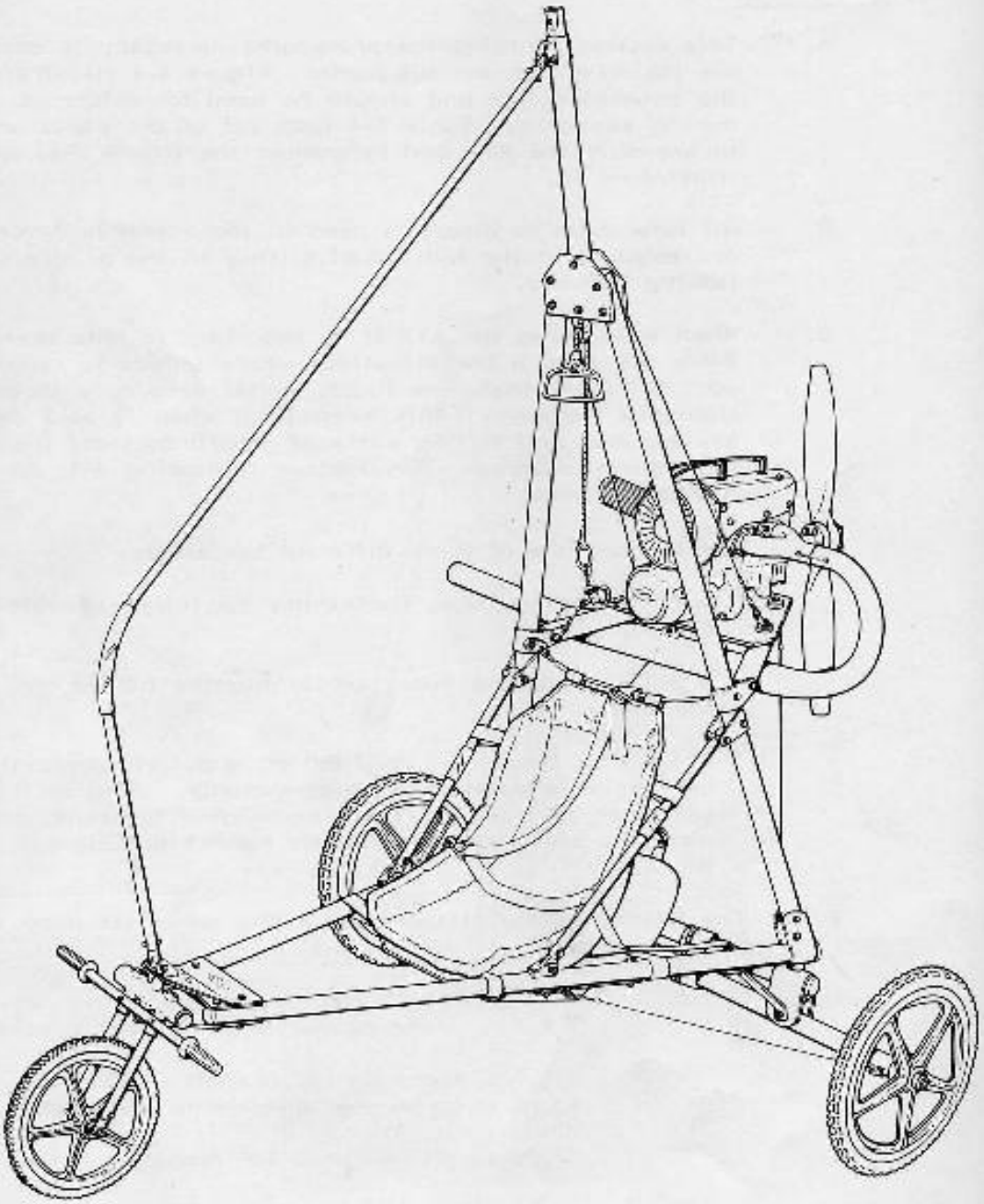
A 19' Shipping Tube, containing the fully assembled Glider.

A 6 1/2' Shipping Tube, containing the tubing for the ATV.

A Tri-wall Container, mounted on a pallet, containing the engine and other large components. Also in this container is a plastic tray, containing the nuts, bolts, washers, and other small items needed to assemble the ATV.

E. The following is a list of consumable materials used during assembly:

- Rubber Cement -- Used to bond neoprene gasket to attachment bracket.
- Silicone Gasket Sealant -- Used for carburetor adapter installation.
- Loctite -- Used for propeller bolts.
- AIR SPEED IND. CEMENT.



ATV
Figure 4-1

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
1	FD-10057	4-2	Side Support Brace Bracket
2	FD-10205	4-2	Seat Side Rail Tube
3	AN4-24A	4-2	Bolt
4	AN960-416	4-2	Washer
5	FD-10250-1	4-2	Side Bar to Swing Axle Cable,Lt
	FD-10250-501	4-2	Side Bar to Swing Axle Cable,Rt
6	FD-10292	4-2	Seat Protector
7	MS21044-N4	4-2	Elastic Stop Nut (Regular)
8	AN4-22A	4-2	Bolt
9	AN960-416	4-2	Washer
10	MS21044-N4	4-2	Elastic Stop Nut (Regular)
11	FD-10267	4-2	Seat/Harness Assembly
12	FD-10210	4-2	Fork Support Plate, Middle
13	FD-10209	4-2	Fork Support Plate, Lower
14	AN4-23A	4-2	Bolt
15	AN960-416	4-2	Washer
16	MS21083-N4	4-2	Elastic Stop Nut (Thin)
17	FD-10211	4-2	Fork Support Plate, Upper
18	AN4-24A	4-2	Bolt
19	AN960-416	4-2	Washer
20	MS21044-N4	4-2	Elastic Stop Nut (Regular)
21	FD-10309	4-2	Fuel Tank Support
22	FD-10231	4-4	Vinyl Guard Sleeve
23	FD-10206	4-4	Axle Cross Tube
24	FD-10264-1	4-4	Main Upright Bracket,Lt
	FD-10264-501	4-4	Main Upright Bracket,Rt
25	FD-10058	4-4	Large Saddle
26	FD-10217	4-4	Lower Axle Support Bracket,Lg
27	FD-10216	4-4	Lower Axle Support Bracket,Sm
28	AN5-50A	4-4	Bolt
29	AN960-516	4-4	Washer
30	FD-10281	4-4	Delrin Spacer
31	MS21045-5	4-4	Engine Lock Nut
32	FD-10202	4-4	Swing Axle Assembly
33	FD-10228-1	4-4	Anti-torque Bracket,Lt
	FD-10228-501	4-4	Anti-torque Bracket,Rt

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
34	AN6-30A	4-4	Bolt
35	AN960-616	4-4	Washer
35A	FD-10058	4-4	Large Saddle
36	52NE064	4-4	Elastic Stop Nut
37	AN4-23A	4-4	Bolt
38	AN960-416	4-4	Washer
39	MS21044-N4	4-4	Elastic Stop Nut (Regular)
40	FD-10256	4-4	Swing Axle Safety Strap
41	FD-10233	4-4	Shock Cord Tang
42	AN4-23A	4-4	Bolt
43	AN960-416	4-4	Washer
44	MS21044-N4	4-4	Elastic Stop Nut (Regular)
45	FD-10258	4-4	Shock Cord
46	FD-10233	4-4	Shock Cord Tang
47	AN4-22A	4-4	Bolt
48	AN960-416	4-4	Washer
49	MS21044-N4	4-4	Elastic Stop Nut (Regular)
50	FD-10271	4-4	Rear Tire
51	FD-10269	4-4	Rear Wheel
52	FD-10270	4-4	Inner Tube, Rear Tire
53	FD-10274	4-4	Axle Bushing, Rear
54	AN4-21A	4-4	Bolt
55	AN960-416	4-4	Washer
56	MS21044-N4	4-4	Elastic Stop Nut (Regular)
57	FD-10273	4-4	Rear Axle
58	FD-10272	4-4	Bushing, Rear Wheel
59	FD-10275	4-4	End Bushing, Rear Axle
60	AN4-16A	4-4	Bolt
61	AN960-416	4-4	Washer
62	MS21083-N4	4-4	Elastic Stop Nut (Thin)
63	FD-10201-1	4-5	Upright Support Tube,Lt
	FD-10201-501	4-5	Upright Support Tube,Rt
64	FD-10229	4-5	Upper Frame Reinforcing Plate

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
65	FD-10291-1	4-5	Glider to ATV Safety Strap, Long
	FD-10291-501	4-5	Glider to ATV Safety Strap, Short
66	AN4-23A	4-5	Bolt
67	AN960-416	4-5	Washer
68	MS21044-N4	4-5	Elastic Stop Nut (Regular)
69	FD-10284-1	4-5	Upper Engine Mount Cable, Lt
	FD-10284-501	4-5	Upper Engine Mount Cable, Rt
70	AN4-24A	4-5	Bolt
71	AN960-416	4-5	Washer
72	MS21044-N4	4-5	Elastic Stop Nut (Regular)
73	FD-10204	4-5	Main Center Boom
74	FD-10302	4-5	Pulley (No Cable)
75	AN4-23A	4-5	Bolt
76	AN960-416	4-5	Washer
77	MS21044-N4	4-5	Elastic Stop Nut (Regular)
78	FD-10236	4-5	Connection Plug, Main Ctr Boom
79	FD-10321	4-5	Bracket w/Pip Pin Assy
80	AN4-22A	4-5	Bolt
81	AN960-416	4-5	Washer
82	MS21044-N4	4-5	Elastic Stop Nut (Regular)
83	FD-10257	4-5	Locking Carabiner
84	AN5-25A	4-6	Bolt
85	AN960-516	4-6	Washer
86	FD-10249	4-6	Lower Engine Mount Cable
87	MS21045-5	4-6	Engine Lock Nut
88	AN4-24A	4-6	Bolt
89	AN960-416	4-6	Washer
90	MS21044-N4	4-6	Elastic Stop Nut (Regular)
91	FD-10215	4-6	Side Rail Engine Mount Bracket
92	AN4-23A	4-6	Bolt
93	AN960-416	4-6	Washer
94	MS21044-N4	4-6	Elastic Stop Nut (Regular)

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
95	FD-10207	4-7	Side Support Brace
96	FD-10290	4-7	Chafe Tube
97	FD-10234-501	4-7	End Plug, Side Support Brace
98	AN4-15A	4-7	Bolt
99	AN960-416	4-7	Washer
100	MS21044-N4	4-7	Elastic Stop Nut (Regular)
101	AN4-23A	4-7	Bolt
102	AN960-416	4-7	Washer
103	FD-10323	4-7	Standoff 1 1/8"
104	FD-10281	4-7	Delrin Spacer
105	MS21044-N4	4-7	Elastic Stop Nut (Regular)
106	FD-10215	4-7	Side Rail Engine Mount Bracket
107	FD-10247	4-7	Seat Hanger Cable Assy
108	AN4-23A	4-7	Bolt
109	AN960-416	4-7	Washer
110	MS21044-N4	4-7	Elastic Stop Nut (Regular)
111	FD-10259	4-8	Front Wheel w/Axle Assy
111A	FD-10260	4-8	Inner Tube, Front Tire
112	FD-10261	4-8	Tire, Front
113	FD-10241	4-8	Lower Fork Tube
114	FD-10253-1	4-8	Front Axle Fitting,Lt
	FD-10253-501	4-8	Front Axle Fitting,Rt
115	AN4-13A	4-8	Bolt
116	AN960-416	4-8	Washer
117	MS21083-N4	4-8	Elastic Stop Nut (Thin)
118	FD-10213	4-8	Upper Fork Section
119	FD-10214	4-8	Fork Cross Tube
120	AN4-25A	4-8	Bolt
121	AN960-416	4-8	Washer
122	MS21044-N4	4-8	Elastic Stop Nut (Regular)
123	FD-10278	4-8	Front Fork Bushing
124	FD-10266	4-8	Pip Pin w/Cable & Plate

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
125	FD-10237	4-8	Bracket
126	AN7-50A	4-8	Bolt
127	FD-10328	4-8	Washer
128	MS21044-N7	4-8	Elastic Stop Nut
129	FD-10230	4-8	Vinyl Foot Rest
130	FD-10280	4-8	Endcap, 1"
131	FD-10212-1	4-9	Engine Mount Tube, Lt
	FD-10212-501	4-9	Engine Mount Tube, Rt
132	AN4-23A	4-9	Bolt
133	AN4-24A	4-9	Bolt
134	AN960-416	4-9	Washer
135	MS21044-N4	4-9	Elastic Stop Nut (Regular)
136	FD-10251	4-9	Pull Start Cable Assy
137	FD-10218	4-9	Engine Mount Plate
138	AN5-36A	4-9	Bolt
139	AN960-516	4-9	Washer
140	AN970-5	4-9	Washer
141	FD-10268-1	4-9	Rubber Bushing, Male
142	FD-10058	4-9	Large Saddle
143	MS21045-5	4-9	Engine Lock Nut
144	FD-10222	4-9	Kawasaki TA440A Engine
145	MS90725-113	4-9	Bolt
146	MS35338-48	4-9	Lockwasher
147	FD-10326	4-9	Engine Bolt Washer
148	FD-10284	4-9	Muffler Bracket
149	Deleted	--	--
150	Deleted	--	--
151	FD-10220	4-10	Exhaust Manifold w/Gasket

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
152	5/16-18	4-10	Nut
153	5/16	4-10	Washer
154	FD-10224	4-10	Muffler
155	FD-10254	4-10	Muffler Spring
155A	FD-10320	4-10	Spring Safety Wire
156	MS90725-38	4-10	Bolt
157	FD-10327	4-10	Washer
158	FD-10268-1	4-10	Rubber Mount, Male
159	FD-10268-501	4-10	Rubber Mount, Female
159A	AN970-5	4-10	Washer
160	MS251922-9	4-10	Nut
161	FD-10294	4-10	Carburetor Adapter
162	FD-10255	4-10	Bolt, 8x25mm
163	MS35338-45	4-10	Lockwasher
164	FD-10221	4-10	Carburetor
165	Deleted	--	--
166	FD-10219	4-10	Air Filter
167	FD-10223	4-10	Propeller, 36" x 16
168	FD-10227	4-10	Propeller Face Plate
169	AN5-27A	4-10	Bolt
170	AN960-516	4-10	Washer
171	MS21045-5	4-10	Engine Lock Nut
172	FD-10285	--	Fuel Pump
173	FD-10242	--	Bolt, 6mm x 25mm
174	AN960-416	--	Washer
--	FD-10263	4-10	Propeller Hub
--	FD-10295	4-10	Propeller Hub Bolt
--	FD-10277	4-10	Propeller Spacer

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
--	MS35338-48	4-10	Lockwasher
--	FD-10238-1	--	Propeller Cover, Left
--	FD-10238-501	--	Propeller Cover, Right
175	FD-10225	4-11	Fuel Tank
176	FD-10310	4-11	Fuel Filter (Inside Tank)
177	FD-10232	4-11	Fuel Line
178	Deleted	--	--
179	FD-10305	4-11	Fuel Primer Bulb
180	FD-10287	4-11	Fuel Filter (In-line)
181	FD-10299	4-11	Plastic Tie (4")
182	FD-10324	4-11	Fuel Tank Cap
183	FD-10325	4-11	Gasket, Fuel Tank Cap
184	FD-10306	4-11	Fitting, Fuel Tank
185	FD-10317	4-11	Fuel Fitting, Female Quick Fit
186	FD-10318	4-11	Fuel Fitting, Male Quick Fit
187	FD-10319	4-11	Fuel Line Barb
188	FD-10289	4-11	Fuel Tank Harness
189	FD-10300	4-11	Plastic Tie (8")
--	FD-10307	7-2	Throttle Handle
--	FD-10276	7-2	Throttle Cable Assy
--	FD-10308	--	Ignition Switch Assy
--	FD-10301	7-2	Velcro Wrap
190	FD-10290	4-13	Chafe Tube
191	FD-10244	4-13	Cable, Front Support Tube
192	FD-10243	4-13	Curved Front Support Tube
193	FD-10234-1	4-13	Base Plug
194	AN4-14A	4-13	Bolt
195	AN960-416	4-13	Washer

TABLE 4-1
MASTER KEY

Index Number	Part Number	Figure Number	Nomenclature
196	MS21083-N4	4-13	Elastic Stop Nut (Thin)
197	FD-10281	4-13	Delrin Spacer
198	FD-10293	4-13	Ring
199	FD-10303	4-13	Starter Cord Extension
—	FD-10311	--	Engine Label
—	FD-10312	--	Pre-flight Checklist Label
—	FD-10313	--	Take-off Checklist Label
—	FD-10314	--	Clear Prop Label
200	FD-10068	7-1	Attachment Bracket
201	AN4-24A	7-1	Bolt
202	AN960-416	7-1	Washer
203	FD-10058	7-1	Large Saddle
204	MS21044-N4	7-1	Elastic Stop Nut (Regular)
205	FD-10070	7-1	Spacer
206	FD-10069	7-1	Hanger Bracket
207	AN4-16A	7-1	Bolt
208	AN960-416	7-1	Washer
209	MS21044-N4	7-1	Elastic Stop Nut (Regular)
210	FD-10071	7-1	Bushing
211	AN5-25A	7-1	Bolt
212	AN970-5	7-1	Washer
213	MS21045-5	7-1	Engine Lock Nut
214	AN5-16	7-1	Bolt
215	AN960-516	7-1	Washer
216	MS21045-5	7-1	ELASTIC ~~Engine~~ Lock Nut
217	FD-10304	7-1	Safety Clip
218	FD-10076	7-1	Neoprene Liner

2. Assembly Procedures

A. Assemble the seat side rail subassembly (Figure 4-2) as follows:

(1) Secure side support brace bracket (1) to left side rail tube (2) with bolt (3), two washers (4), left side bar to swing axle cable (5), seat protector (6) and nut (7).

NOTE

Insure that left side bar to swing axle cable (FD-10250-1) is used on the left side rail tube. Position cable (5) such that the longer cable is on the outboard and the shorter one is on the inboard.

(2) Repeat step 2.A.(1) for right side rail tube except use right side bar to swing axle cable (FD-10250-501).

(3) Position fuel tank support (21) such that metal pieces are facing up. Slide straps over side rail tubes (2).

(4) Secure rear of seat protector (6) with two bolts (8), washers (9) and nuts (10).

(5) Tighten the following nuts securely:

(7) two places
(10) two places

(6) Position seat (11) such that safety harness is facing up. Slide straps sewn into sides of seat (11) over side rail tubes (2). Route rear straps above straps of fuel tank support.

(7) Secure middle fork support plate (12), using forwardmost holes and lower fork support plate (13) to side rail tubes (2) with two bolts (14), washers (15) and nuts (16).

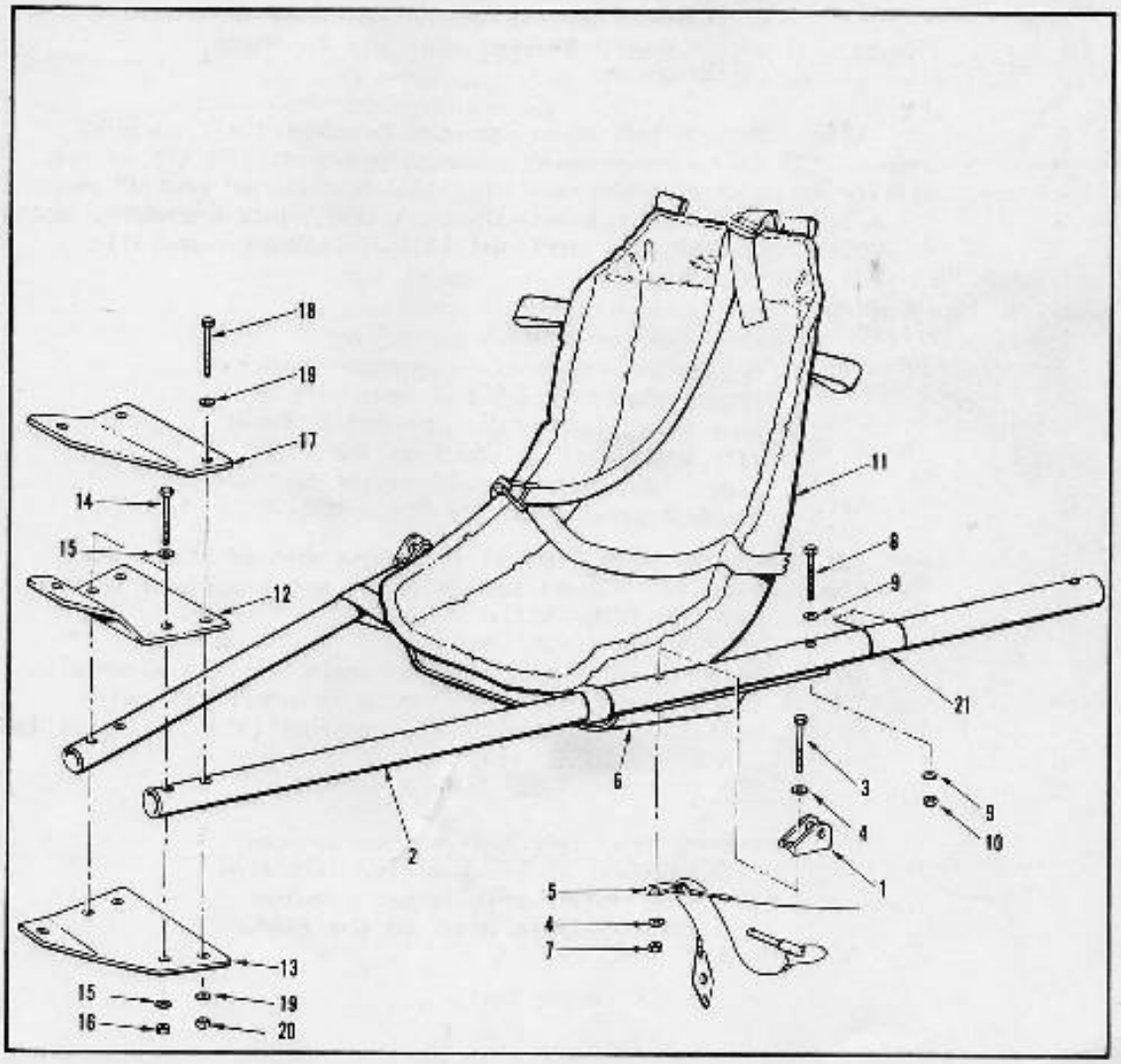
(8) Secure upper fork support plate (17) to middle and lower fork support plates with two bolts (18), washers (19) and nuts (20).

(9) Tighten the following nuts securely:

(16) two places
(20) two places

KEY TO FIGURE 4-2

Index Number	Part Number	Qty	Nomenclature
1	FD-10057	2	Side Support Brace Bracket
2	FD-10205	2	Seat Side Rail Tube
3	AN4-24A	2	Bolt
4	AN960-416	4	Washer
5	FD-10250-1	1	Side Bar to Swing Axle Cable, Lt
	FD-10250-501	1	Side Bar to Swing Axle Cable, Rt
6	FD-10292	1	Seat Protector
7	MS21044-N4	2	Elastic Stop Nut (Regular)
8	AN4-22A	2	Bolt
9	AN960-416	4	Washer
10	MS21044-N4	2	Elastic Stop Nut (Regular)
11	FD-10267	1	Seat/Harness Assembly
12	FD-10210	1	Fork Support Plate, Middle
13	FD-10209	1	Fork Support Plate, Lower
14	AN4-23A	2	Bolt
15	AN960-416	4	Washer
16	MS21083-4	2	Elastic Stop Nut (Thin)
17	FD-10211	1	Fork Support Plate, Upper
18	AN4-24A	2	Bolt
19	AN960-416	4	Washer
20	MS21044-N4	2	Elastic Stop Nut (Regular)
21	FD-10309	1	Fuel Tank Support



Seat Side Rail Subassembly
Figure 4-2

B. Assemble the swing axle subassembly (Figure 4-4) as follows:

(1) Slide two vinyl guard sleeves (22), [redacted] and fuel tank support over axle cross tube (23).

DO NOT INSTALL SWING AXLE SAFETY STRAP TO SWING AXLE.

A light coating of dishwashing solution or silicone on the inside diameter of vinyl guard sleeves will aid in their installation.

(2) Secure left main upright bracket (24), saddles (25), lower axle support brackets (26,27) to left end of side rail tube (2) and either end of axle cross tube (23) with bolt (28), washers (29), delrin spacer (30) and nut (31). Tighten nut (31) securely.

NOTE

Insure that left main upright bracket (FD-10264-1) is used on the left side and that right main upright bracket (FD-10264-501) is used on the right side. Brackets should angle slightly inward when properly installed.

(3) Repeat step 2.B.(2) for right end of side rail tube (2) except secure right main upright bracket (FD-10264-501).

(4) Secure swing axle (32) to main upright brackets (26,27) and left anti-torque bracket (33) with bolt (34), washers (35), saddles (35A) and nut (36).

NOTE

Insure that left anti-torque bracket (FD-10228-1) is used on the left side and that right anti-torque bracket (FD-10228-501) is used on the right side.

(5) Secure remaining end of left anti-torque bracket (33) to side rail tube (2) with bolt (37), two washers (38) and nut (39). Tighten nuts (36) and (39) securely.

(6) Repeat steps 2.B.(4) and (5) for right swing axle except secure right anti-torque bracket (FD-10228-501).

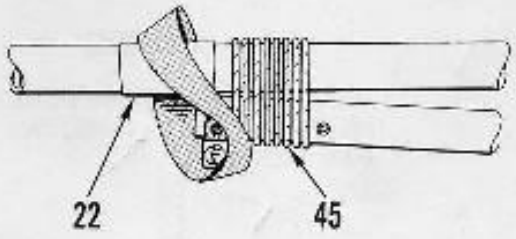
(7) Temporarily secure shock cord tang (41) and inboard cable (5) to swing axle (32) with bolt (42), washers (43) and nut (44).

(8) Repeat step 2.B.(7) for right swing axle (32) inboard cable.

(9) Position vinyl guard sleeves (22) such that they prevent the swing axle end from directly contacting axle cross tube. (Figure 4-3.)

(10) Cut shock cord (45) into two 60" lengths. Sear the ends to prevent fraying. Slip one end of shock cord (45) through large hole in shock cord tang (41). Secure end with an overhand knot, leaving a 1" running end.

VIEW FROM REAR



RIGHT SWING AXLE

Shock Cord Installation
Figure 4-3

(11) Repeat step 2.B.(10) for remaining shock cord tang on right swing axle.

(12) Support the center of the axle cross tube (23) by an appropriate means.

(13) Slip the remaining end of the shock cord (45) through shock cord tang (46) and secure with an appropriate overhand knot, leaving a 1" end.

(14) Refer to Figure 4-3 and wrap shock cord around swing axle (32) and axle cross tube (27) eight times.

(15) Secure shock cord tang (46) and swing axle safety strap (40) to swing axle (32) with bolt (47), two washers (48) and nut (49). Tighten nut (49) securely.

(16) Repeat step 2.B.(13)-(15) for remaining swing axle.

(17) Assemble the rear wheels as follows:

(a) Insert tire tube (52) into tire (50).

(b) Gently work, by hand, one bead of tire (50) around circumference of rear wheel (51).

NOTE

Position tire tube stem in close proximity to hole in rear wheel..

(c) Insert tire tube stem into hole in rear wheel (51).

CAUTION

INSURE TUBE IS PROPERLY SEATED ON RIM PRIOR TO INFLATING, AS DAMAGE TO TUBE MAY RESULT.

(d) Gently work, by hand, second bead of tire (50) around circumference of rear wheel (51) until tire is seated on rim. Check tire and tube for proper orientation prior to inflation. Inflate to 35-40 psi.

(e) Repeat steps 2.B.(17)(a)-(d) for remaining rear wheel.

(18) Insert axle bushing (53) into end of swing axle (32).

(19) Insert rear axle (57) into end of axle bushing (53).

(20) Secure axle bushing (53), rear axle (57) and outboard cable (5) to swing axle (32) with bolt (54), washers (55) and nut (56). Tighten nut (56) securely.

(21) Position one bushing (58) on rear axle (57).

(22) Position rear wheel, second bushing (58) and end bushing (59) on rear axle (57).

(23) Secure end bushing (59) to rear axle (57) with bolt (60), washers (61) and nut (62). Tighten nut (62) securely.

(24) Repeat steps 2.B.(18) thru (23) for remaining rear wheel.

KEY TO FIGURE 4-4

Index Number	Part Number	Qty	Nomenclature
22	FD-10231	2	Vinyl Guard Sleeve
23	FD-10206	1	Axle Cross Tube
24	FD-10264-1	1	Main Upright Bracket, Lt
	FD-10264-501	1	Main Upright Bracket, Rt
25	FD-10058	4	Large Saddle
26	FD-10217	2	Lower Axle Support Bracket, Large
27	FD-10216	2	Lower Axle Support Bracket, Small
28	AN5-50A	2	Bolt
29	AN960-516	4	Washer
30	FD-10281	2	Delrin Spacer
31	MS21045-5	2	Engine Lock Nut
32	FD-10202	2	Swing Axle Assembly
33	FD-10228-1	1	Anti-torque Bracket, Lt
	FD-10228-501	1	Anti-torque Bracket, Rt
34	AN6-30A	2	Bolt
35	AN960-616	4	Washer
35A	FD-10058	4	Large Saddle
36	52NE064	2	Elastic Stop Nut
37	AN4-23A	2	Bolt
38	AN960-416	4	Washer
39	MS21044-N4	2	Elastic Stop Nut (Regular)
40	FD-10256	2	Swing Axle Safety Strap
41	FD-10233	2	Shock Cord Tang
42	AN4-23A	2	Bolt
43	AN960-416	4	Washer
44	MS21044-N4	2	Elastic Stop Nut (Regular)
45	FD-10258	1	Shock Cord
46	FD-10233	2	Shock Cord Tang
47	AN4-22A	2	Bolt
48	AN960-416	4	Washer
49	MS21044-N4	2	Elastic Stop Nut (Regular)
-50	FD-10271	2	Rear Tire
-51	FD-10269	2	Rear Wheel
-52	FD-10270	2	Inner Tube, Rear Tire

-Item Not Illustrated

KEY TO FIGURE 4-4 (Continued)

Index Number	Part Number	Qty	Nomenclature
53	FD-10274	2	Axle Bushing, Rear
54	AN4-21A	2	Bolt
55	AN960-416	4	Washer
56	MS21044-N4	2	Elastic Stop Nut (Regular)
57	FD-10273	2	Rear Axle
58	FD-10272	4	Bushing, Rear Wheel
59	FD-10275	2	End Bushing, Rear Axle
60	AN4-16A	2	Bolt
61	AN960-416	4	Washer
62	MS21083-N4	2	Elastic Stop Nut (Thin)

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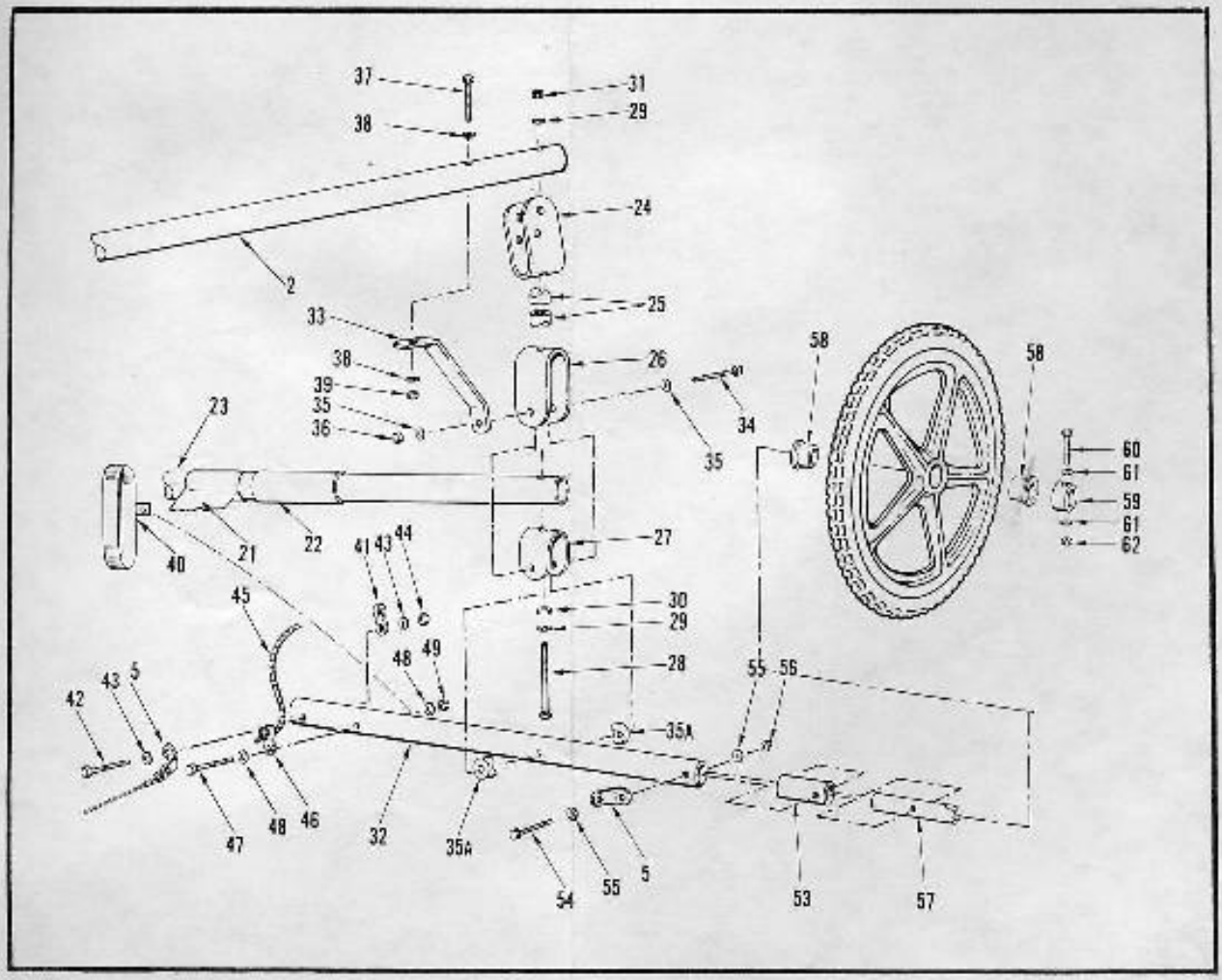


Swing Axle Subassembly
Figure 4-4

Assemble upright support tube (Figure 4-5) subassembly as follows:

(1) Position left and right upright support tubes (63) side by side on a flat surface.

(2) Temporarily secure two upper frame plates (64) and safety straps (65) to left and right upright support tubes (63) with two bolts (66), washers (67) and nuts (68).

(3) Temporarily secure two upper engine mount cables (69) to upper frame plates (64) with two bolts (70), washers (71) and nuts (72).

NOTE

The left engine mount cable will have a piece of plastic tubing approximately 12" long while the right cable will not.

(4) Insert center boom (73) between upper frame plates (64).

(5) Temporarily secure center boom (73) to upper frame plates (64), using top hole, with bolt (75), washers (76) and nut (77).

(6) Insert pulley (74) into base of center boom (73).

(7) Secure pulley (74) to base of center boom (73) with bolt (75), washers (76) and nut (77).

(8) Tighten following nuts securely:

(68) two places
(72) two places
(77) two places

(9) Insert connection plug (78) into top of center boom (73).

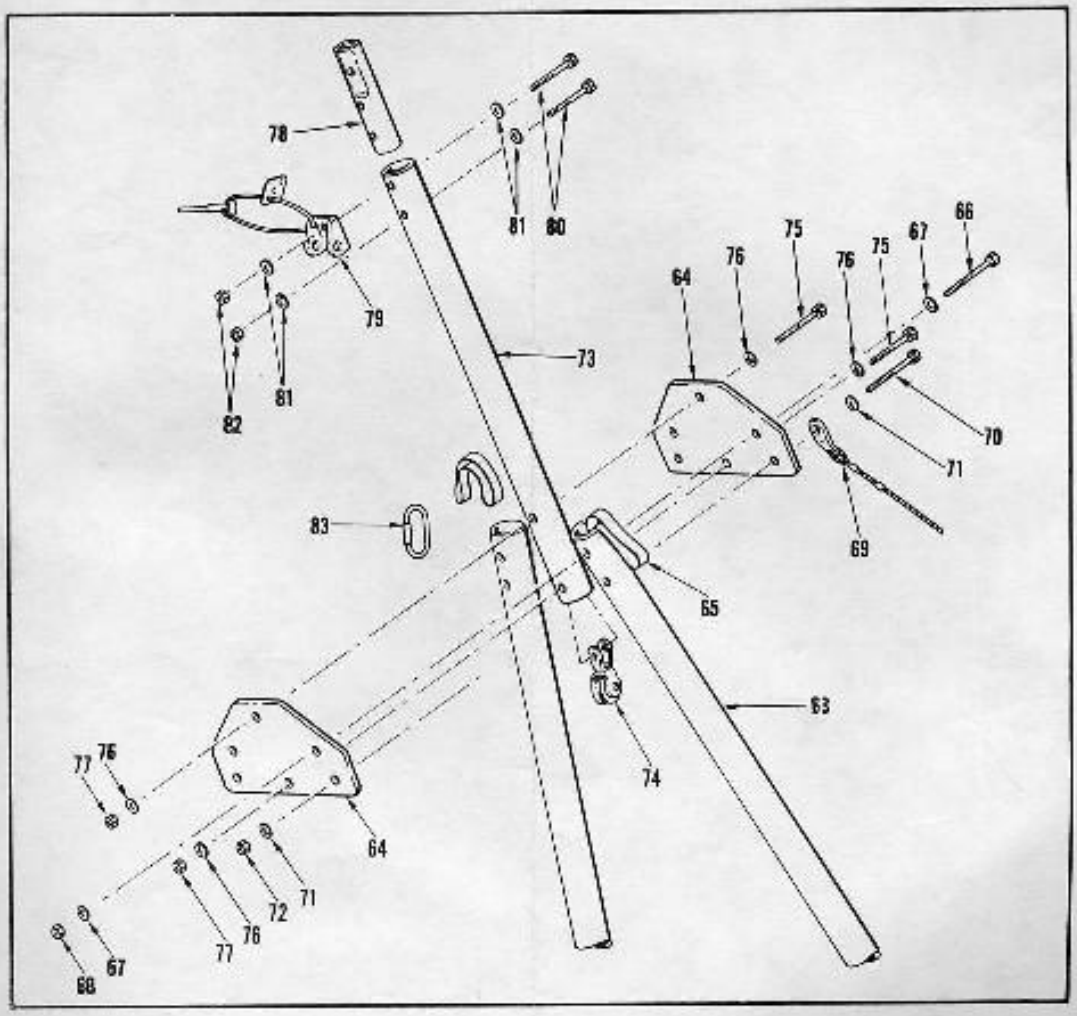
(10) Temporarily secure connection plug (78) to center boom (73) with bolt (80), washers (81) and nut (82).

(11) Secure bracket (79) to center boom (73) with bolt (80), washers (81) and nut (82). Tighten two nuts (82) securely.

(12) Attach locking carabiner (83) to short safety strap (65).

KEY TO FIGURE 4-5

Index Number	Part Number	Qty	Nomenclature
63	FD-10201-1	1	Upright Support Tube, Lt
	FD-10201-501	1	Upright Support Tube, Rt
64	FD-10229	2	Upper Frame Reinforcing Plate
65	FD-10291-1	1	Glider to ATV Safety Strap, Long
	FD-10291-501	1	Glider to ATV Safety Strap, Short
66	AN4-23A	2	Bolt
67	AN960-416	4	Washer
68	MS21044-N4	2	Elastic Stop Nut (Regular)
69	FD-10248-1	1	Upper Engine Mount Cable, Lt
	FD-10248-501	1	Upper Engine Mount Cable, Rt
70	AN4-24A	2	Bolt
71	AN960-416	4	Washer
72	MS21044-N4	2	Elastic Stop Nut (Regular)
73	FD-10204	1	Main Center Boom
74	FD-10302	1	Pulley (no cable)
75	AN4-23A	2	Bolt
76	AN960-416	4	Washer
77	MS21044-N4	2	Elastic Stop Nut (Regular)
78	FD-10236	1	Connection Plug, Main Center Boom
79	FD-10321	1	Bracket w/Pip Pin Assy
80	AN4-22A	2	Bolt
81	AN960-416	4	Washer
82	MS21044-N4	2	Elastic Stop Nut (Regular)
83	FD-10257	1	Locking Carabiner



Upright Support Tube Subassembly
Figure 4-5

D. Attach upright support tube subassembly to cage side rails as follows (Figure 4-6):

(1) Position upright support tube subassembly in left and right main upright brackets (24).

NOTE

Insure that left upright support tube is secured to left main upright bracket and not to right upright bracket.

(2) Temporarily secure base of left upright support tube (63) and one end of lower engine mount cable (86) to left main upright bracket (24) with bolt (84), four washers (85) and nut (87).

(3) Secure bolt (88), washers (89) to left main upright bracket (24) with nut (90). Tighten nuts (87) and (90) securely.

(4) Repeat steps 2.D.(2) and (3) for right upright support tube.

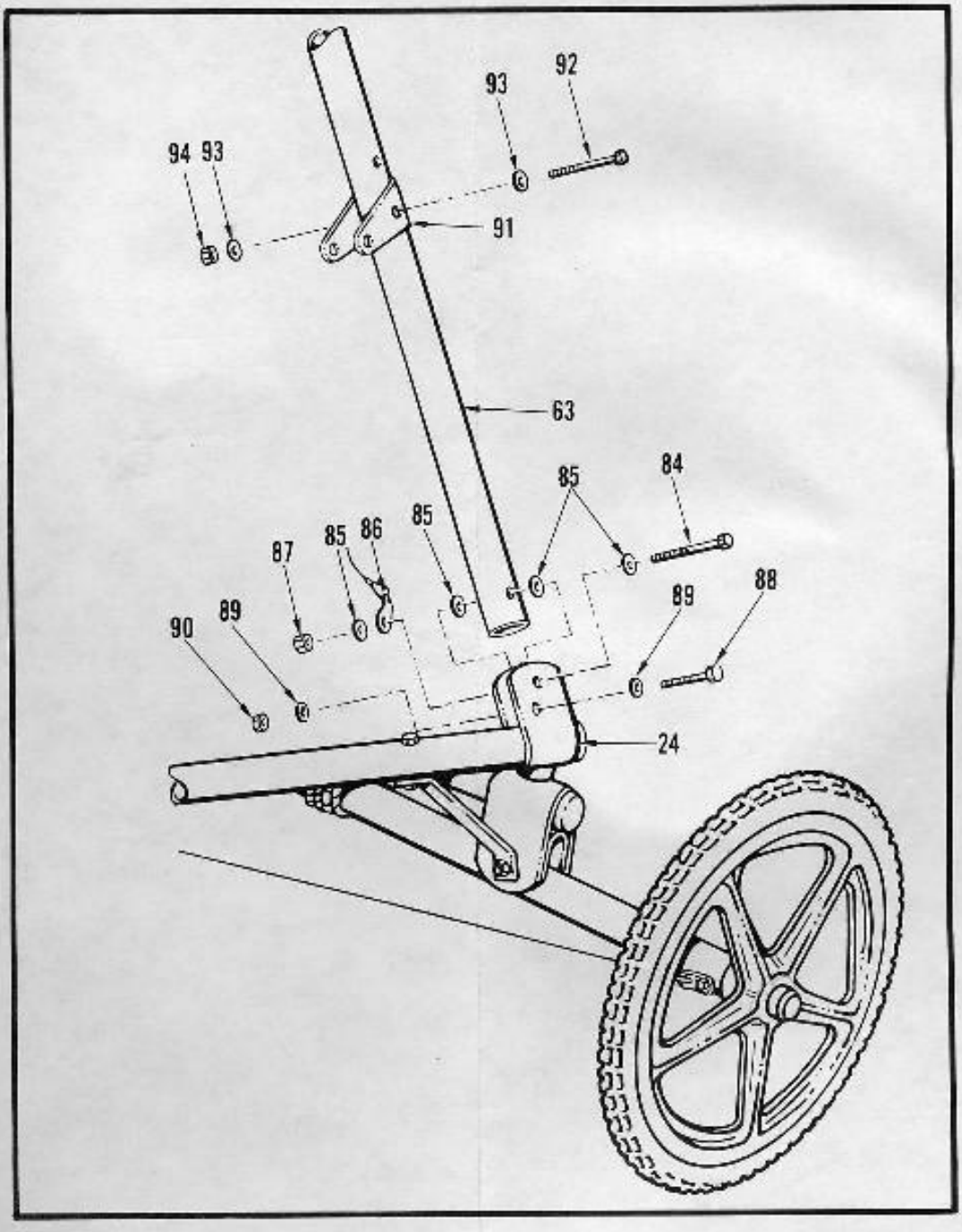
(5) Secure side brace tube bracket (91) to left upright support tube (63) with bolt (92), washers (93) and nut (94). Tighten nut (94) securely.

(6) Repeat step 2.D.(5) for right upright support tube.

KEY TO FIGURE 4-6

Index Number	Part Number	Qty	Nomenclature
84	AN5-25A	2	Bolt
85	AN960-516	8	Washer
86	FD-10249	2	Lower Engine Mount Cable
87	MS21045-5	2	Engine Lock Nut
88	AN4-24A	2	Bolt
89	AN960-416	4	Washer
90	MS21044-N4	2	Elastic Stop Nut (Regular)
91	FD-10215	2	Side Rail Engine Mount Bracket
92	AN4-23A	2	Bolt
93	AN960-416	4	Washer
94	MS21044-N4	2	Elastic Stop Nut (Regular)

-Item Not Illustrated



Upright Support Tube Attachment
Figure 4-6

E. Attach side support braces to upright support tubes and cage side rails as follows (Figure 4-7):

(1) Cut two 2" lengths of chafe tube (96). Position chafe tube (96) on side support brace (95) approximately 9 1/2" from end that attaches to bracket (91). (Chafe tube protects side support brace when ATV is in storage/transport configuration.)

NOTE

A light coating of dishwashing solution or silicone will ease chafe tube installation.

(2) Insert end plug (97) into base of side support brace (95).

(3) Secure end plug (97) to side support brace (95) with bolt (98), washers (99) and nut (100). Tighten nut (100) securely.

(4) Insert side support brace (95) into strap sewn into side of seat.

(5) Secure side support brace (95) to bracket (91) with bolt (101), washers (102), standoffs (103), spacer (104) and nut (105). Tighten nut (105) securely.

(6) Repeat steps 2.E.(1) thru (5) for right side support brace.

(7) Position left and right side support braces (95) in close proximity to their respective brackets (1).

(8) Secure side support braces (95) to brackets (1) with pip pins and safety plates attached by cable.

(9) Position side rail engine mount bracket (106) on left upright support tube.

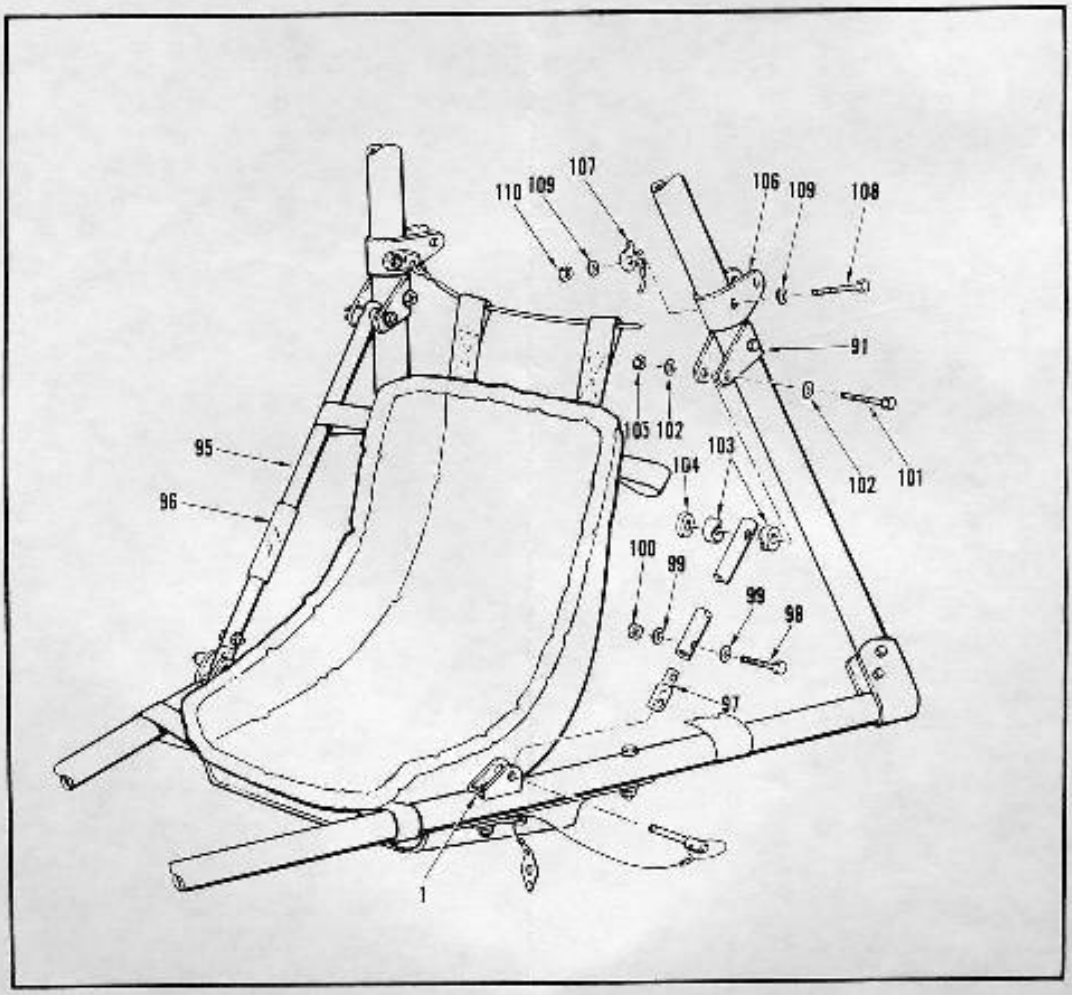
(10) Secure side rail engine mount bracket (106) and one end of seat hanger cable (107) to left upright support tube with bolt (108), washers (109) and nut (110). Tighten nut (110) securely.

(11) Pass free end of seat hanger cable (107) through two straps sewn into top of seat.

(12) Repeat steps 2.E.(9) and (10) for right side rail engine mount bracket.

KEY TO FIGURE 4-7

Index Number	Part Number	Qty	Nomenclature
95	FD-10207	2	Side Support Brace
96	FD-10290	1	Chafe Tube
97	FD-10234-501	2	End Plug, Side Support Brace
98	AN4-15A	2	Bolt
99	AN960-416	4	Washer
100	MS21044-N4	2	Elastic Stop Nut (Regular)
101	AN4-23A	2	Bolt
102	AN960-416	4	Washer
103	FD-10323	4	Standoff, 1 1/8"
104	FD-10281	2	Delrin Spacer
105	MS21044-N4	2	Elastic Stop Nut (Regular)
106	FD-10215	2	Side Rail Engine Mount Bracket
107	FD-10247	1	Seat Hanger Cable Assembly
108	AN4-23A	2	Bolt
109	AN960-416	4	Washer
110	MS21044-N4	2	Elastic Stop Nut (Regular)



Side Support Brace Attachment

Figure 4-7

FD-10247

Assemble front fork subassembly (Figure 4-8) as follows:

(1) Insert inner tube (111A) into tire (112).

(2) Gently work one bead of tire (112) around circumference of front wheel (111).

(3) Gently work second bead of tire (112) around circumference of front wheel (111) until tire is properly seated on rim.

CAUTION

INSURE TUBE IS PROPERLY SEATED ON RIM PRIOR TO INFLATING, AS DAMAGE TO TUBE MAY RESULT.

(4) Inflate tire to 35-40 psi.

(5) Secure left front axle fitting (114) to fork tube (113) with bolt (115), washers (116) and nut (117). Tighten nut (117) securely.

(6) Repeat step 2.F.(5) for right fork tube, using right front axle fitting.

(7) Position left and right front axle fittings on front wheel axle. Secure with hardware supplied with axle.

(8) Insert ends of left and right fork tubes (113) into upper fork section (118).

(9) Secure left fork tube (113) and fork cross tube (119) to upper fork section (118) with bolt (120), washers (121) and nut (122).

(10) Repeat step 2.F.(9) for right fork tube (113). Tighten nuts (122) securely.

(11) Insert front fork bushing (123) into upper fork section (118).

(12) Position pip pin cable loop (124) over neck of upper fork section (118).

(13) Position upper fork section (118) between fork support plates.

(14) Secure upper fork section (118) and bracket (125) to fork support plates with bolt (126), washer (127) and nut (128). Tighten nut (128) securely.

(15) Slide vinyl foot rest (129) over one end of fork cross tube (119).

(16) Puncture end of second vinyl foot rest with a small pointed tool.

NOTE

Only one vinyl foot rest is punctured to allow air to escape during installation.

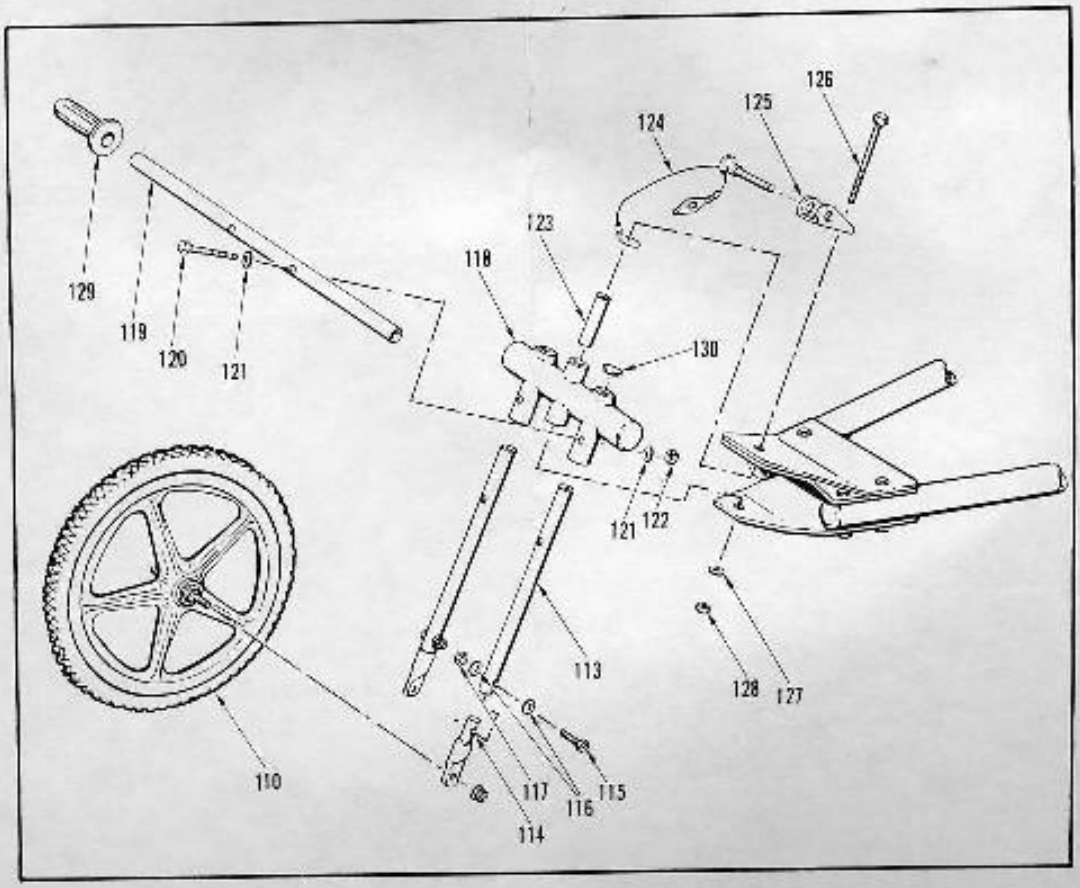
(17) Slide second vinyl foot rest (129) over end of fork cross tube (119).

(18) Press endcaps (130) into their respective hole on upper fork section (118).

KEY TO FIGURE 4-8

Index Number	Part Number	Qty	Nomenclature
-111	FD-10259	1	Front Wheel w/Axle Assembly
-111A	FD-10260	1	Inner Tube, Front Tire
-112	FD-10261	1	Tire, Front
113	FD-10241	2	Lower Fork Tube
114	FD-10253-1	1	Front Axle Fitting, Lt
	FD-10253-501	1	Front Axle Fitting, Rt
115	AN4-13A	2	Bolt
116	AN960-416	4	Washer
117	MS21083-N4	2	Elastic Stop Nut (Thin)
118	FD-10213	1	Upper Fork Section
119	FD-10214	1	Fork Cross Tube
120	AN4-25A	2	Bolt
121	AN960-416	4	Washer
122	MS21044-N4	2	Elastic Stop Nut (Regular)
123	FD-10278	1	Front Fork Bushing
124	FD-10266	1	Pip Pin w/Cable & Plate
125	FD-10237	1	Bracket
126	AN7-50A	1	Bolt
127	FD-10328	1	Washer
128	MS21044-N7	1	Elastic Stop Nut
129	FD-10230	2	Vinyl Foot Rest
130	FD-10280	2	Endcap, 1"

-Item Not Illustrated



Front Fork Subassembly
Figure 4-8

G. Assemble engine mount (Figure 4-9) as follows:

(1) Secure left engine mount tube (131) to side rail engine mount bracket with bolt (132), washers (134) and nut (135). Tighten nut (135) securely.

(2) Secure right engine mount tube (131) and pull start cable assembly (136) to engine mount tube bracket with bolt (133), washers (134) and nut (135). Tighten nut (135) securely.

(3) Temporarily secure engine mount plate (137) and lower engine mount cable (86) to left engine mount tube (131) with bolt (138), washers (139), (140), rubber bushings (141), saddles (142) and nut (143).

(4) Refer to Figure 4-9 and note DIFFERENCE in hardware stack-up for attaching upper engine mount cable. Temporarily secure upper engine mount cable to engine mount plate using forwardmost hole with hardware called out in step 2.G.(3).

(5) Repeat steps 2.G.(3) and 2.G.(4) for right engine mount tube. Tighten nuts (143) securely.

(6) Position engine (144) on engine mount plate (137).

(7) Temporarily secure rear of engine (144) to engine mount plate (137) with two bolts (145) and washers (146,147).

(8) Temporarily secure front of engine (144) and muffler brackets (148) with bolts (145) and washers (146,147).

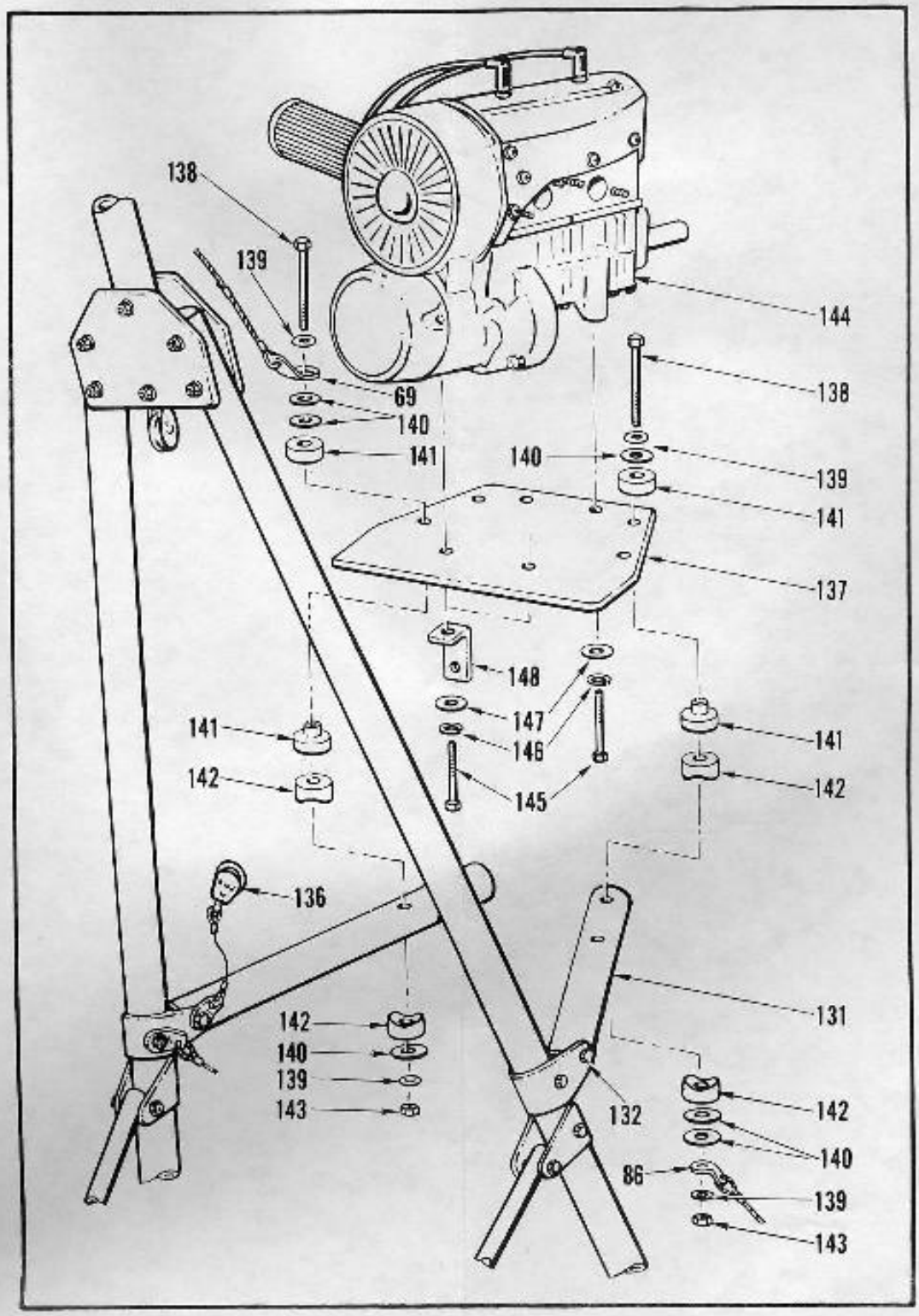
NOTE

Leave bolts (145) finger tight. They will be torqued in a later section.

KEY TO FIGURE 4-9

Index Number	Part Number	Qty	Nomenclature
131	FD-10212-1	1	Engine Mount Tube, Lt
	FD-10212-501	1	Engine Mount Tube, Rt
132	AN4-23A	1	Bolt, Lt
-133	AN4-24A	1	Bolt, Rt
-134	AN960-416	4	Washer
-135	MS21044-N4	2	Elastic Stop Nut (Regular)
136	FD-10251	1	Pull Start Cable Assembly
137	FD-10218	1	Engine Mount Plate
138	AN5-36A	4	Bolt
139	AN960-516	8	Washer
140	AN970-5	12	Washer
141	FD-10268-1	8	Rubber Bushing, Male
142	FD-10058	8	Large Saddle
143	MS21045-5	4	Engine Lock Nut
144	FD-10222	1	Kawasaki TA440A--Engine
145	MS90725-113	4	Bolt
146	MS35338-48	4	Lockwasher
147	FD-10326	4	Engine Bolt Washer
148	FD-10284	2	Muffler Bracket
-149	Deleted		
-150	Deleted		

-Item Not Illustrated



Engine Mount
Figure 4-9

H. Assemble engine accessories (Figure 4-10) as follows:

WARNING

INSURE SPARK PLUG WIRES ARE DISCONNECTED FROM SPARK PLUGS PRIOR TO ASSEMBLY. DEATH OR SERIOUS INJURY MAY RESULT IF ENGINE STARTS INADVERTENTLY.

(1) Secure exhaust manifold w/gasket (151) to engine with four nuts (152) and washers (153). Tighten nuts (1520 securely. Gasket, nuts and washers are included with engine.

NOTE

Insure exhaust manifold is properly seated.

(2) Insert muffler (154) over end of exhaust manifold (151).

(3) Attach two springs (155) to hooks on exhaust manifold (151) and muffler (154). Cut safety wire (155A) in half. Safety wire springs to hooks.

(4) Secure muffler (154) to two muffler brackets (148) with two bolts (156), washers (157), rubber mounts (158,159), washers (159A) and nuts (160). Tighten nuts (160) securely.

(5) Tighten four bolts (Figure 4-9, Index Number 145) to a torque of 50 ft-lbs.

CAUTION

INSURE THAT ONLY BOLTS CALLED OUT IN PROCEDURE ARE USED. THESE BOLTS HAVE METRIC THREADS.

(6) Apply silicone sealant to mating surfaces of carburetor adapter and intake manifold. Secure carburetor adapter (161) to intake manifold with two metric bolts (162) and washers (163). Tighten metric bolts (162) securely.

(7) Position carburetor (164) on caraburetor adapter (161). Secure by tightening compression ring on carburetor adapter (161).

(8) Preoil air filter (166). Secure air filter (166) to carburetor (164) with air filter clamp.

(9) Apply a light coating of Loctite to thread bearing surfaces of four bolts (169).

(10) Secure propeller (167) and face plate (168) to propeller hub with four bolts (169), washers (170) and nuts (171). Tighten nuts (171) to a torque of 18 ft-lbs.

NOTE

Position propeller on propeller hub such that curved surface faces direction of flight.

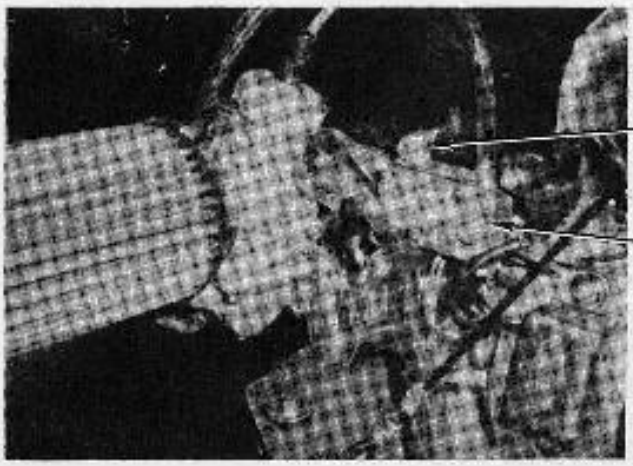
(11) Remove bolt securing engine cowling (refer to "Fuel Pump Location" below) and discard.

CAUTION

INSURE THAT ONLY BOLT CALLED OUT IN PROCEDURE IS USED. THIS BOLT HAS METRIC THREADS.

(12) Apply a light coating of Loctite to thread bearing surfaces of bolt (173).

(13) Secure fuel pump (172) to engine with metric bolt (173) and four washers (174). Tighten metric bolt (173) securely.

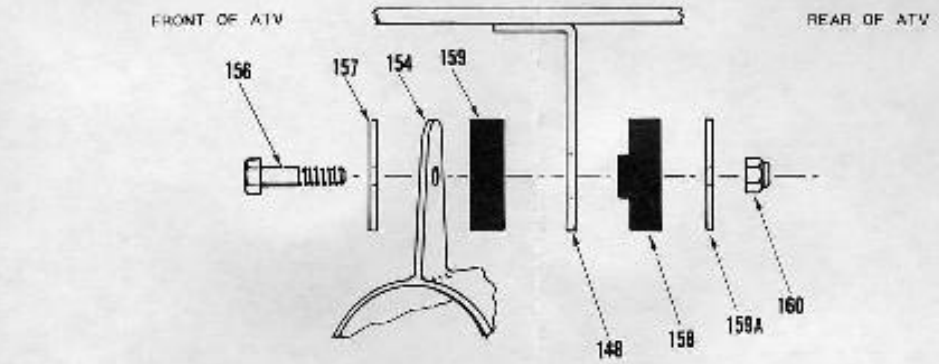


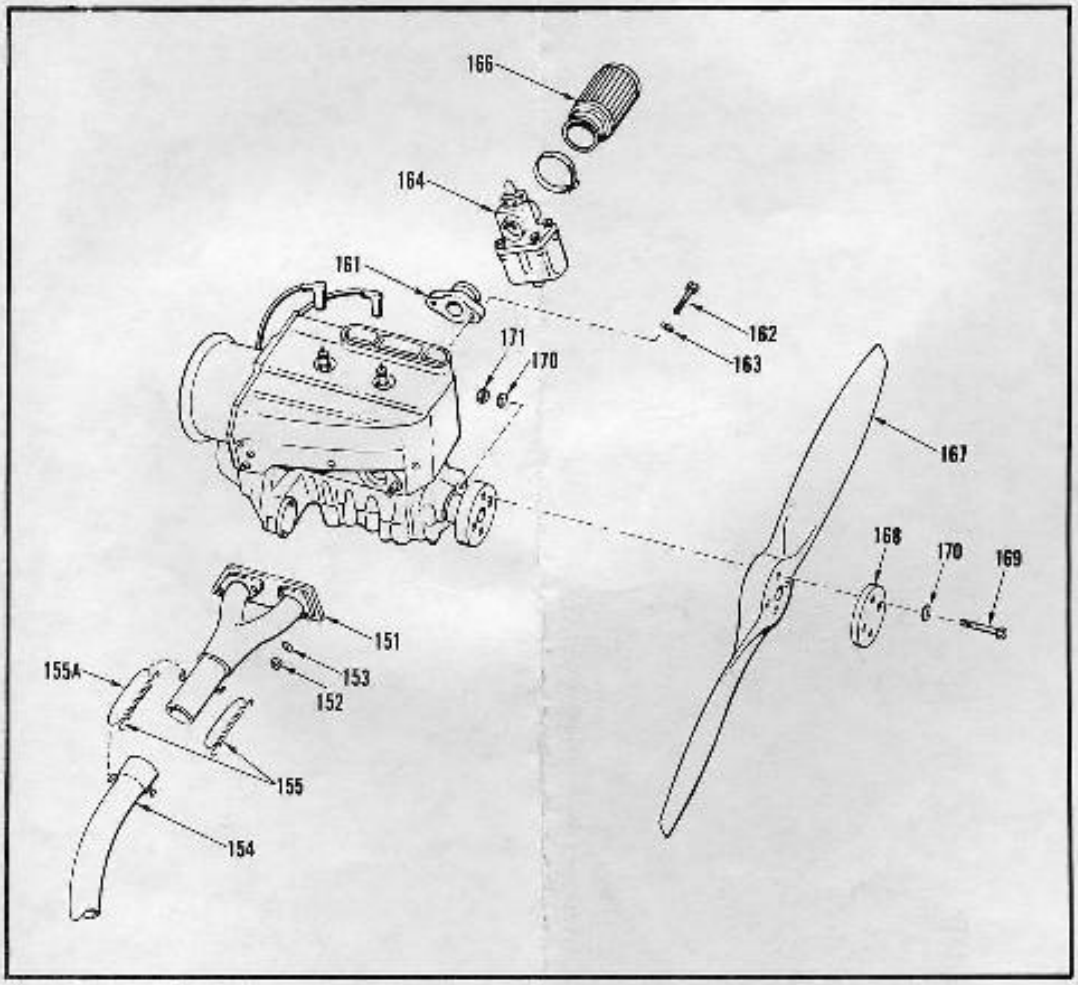
Fuel Pump Location

KEY TO FIGURE 4-10

Index Number	Part Number	Qty	Nomenclature
151	FD-10220	1	Exhaust Manifold w/Gasket
152	5/16-18	4	Nut
153	5/16	4	Washer
154	FD-10224	1	Muffler
155	FD-10254	2	Muffler Spring
155A	FD-10320	1	Spring Safety Wire
156	MS90725-38	2	Bolt
157	FD-10327	2	Washer
158	FD-10268-1	2	Rubber Mount, Male
159	FD-10268-501	2	Rubber Mount, Female
159A	AN970-5	2	Washer
160	MS251922-9	2	Nut
161	FD-10294	1	Carburetor Adapter
162	FD-10255	2	Bolt, 8x25mm
163	MS35338-45	2	Lock washer
164	FD-10221	1	Carburetor
-165	Deleted		
166	FD-10219	1	Air Filter
167	FD-10223	1	Propeller, 36" x 16
168	FD-10227	1	Propeller Face Plate
169	AN5-27A	4	Bolt
170	AN960-516	8	Washer
171	MS21045-5	4	Engine Lock Nut
172	FD-10285	1	Fuel Pump (see page 4-42)
173	FD-10242	1	Bolt, 6mm x 25mm (see page 4-42)
-174	AN960-416	4	Washer (see page 4-42)
*	FD-10263	1	Propeller Hub
*	FD-10295	1	Propeller Hub Bolt
*	FD-10277	1	Propeller Spacer
*	MS35338-48	1	Lock washer
-	FD-10238-1	1	Propeller Cover, Left
-	FD-10238-501	1	Propeller Cover, Right

* Assembled to Engine at Factory
\- Item Not Illustrated





Engine Accessories
Figure 4-10

I. Fuel System (Figure 4-11)

(1) Slip fuel tank harness over fuel tank (175).

(2) Position fuel tank (175) on fuel tank suspension such that gas cap is at rear of ATV.

(3) Secure fuel tank and harness to fuel tank suspension with four velcro straps attached to harness.

(4) Cut a piece of fuel line (177) approximately 9" long. Insert one end of fuel line over nipple on inside of fuel tank fitting (FD-10306).

(5) Insert fuel filter (176) on opposite end of fuel line. Secure fuel line to fuel tank fitting and also to fuel filter (176) with plastic tie (181).

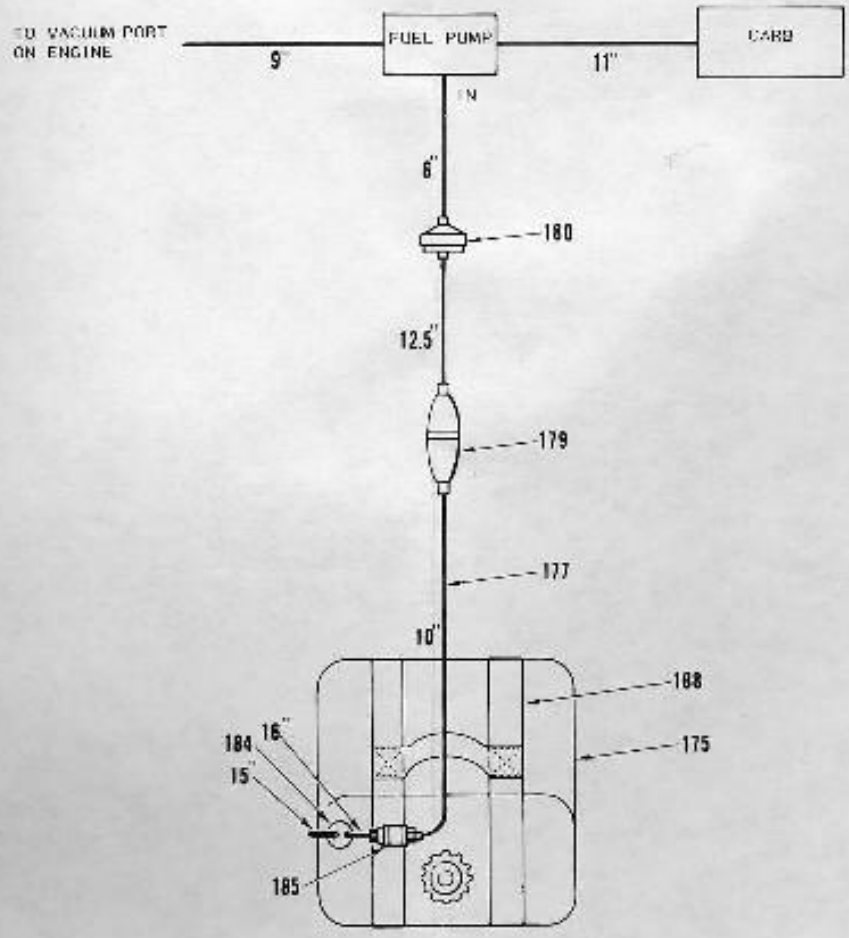
(6) Screw fuel tank fitting into fuel tank (175).

(7) Assemble remainder of fuel system as illustrated in Figure 4-11. Secure all connections with plastic ties (181). Cut fuel line to length listed in figure.

KEY TO FIGURE 4-11

Index Number	Part Number	Qty	Nomenclature
175	FD-10225	1	Fuel Tank
-176	FD-10310	1	Fuel Filter (Inside Tank)
177	FD-10232	2	Fuel Line (Must Be Cut to Length)
178	Deleted		
179	FD-10305	1	Fuel Primer Bulb
180	FD-10287	1	Fuel Filter (In-line)
-181	FD-10299	15	Plastic Tie (4")
-182	FD-10324	1	Fuel Tank Cap
-183	FD-10325	1	Gasket, Fuel Tank Cap
184	FD-10306	1	Fitting, Fuel Tank
185	FD-10317	1	Fuel Fitting, Female Quick Fit
-186	FD-10318	1	Fuel Fitting, Male Quick Fit
-187	FD-10319	1	Fuel Line Barb
188	FD-10289	1	Fuel Tank Harness
-189	FD-10300	1	Plastic Tie (8")

- Item Not Illustrated



Fuel System
Figure 4-11

J. Attach throttle cable to carburetor as follows:

(1) Unscrew cap to carburetor and remove spring, slide, locking plate and mixture needle. Insure that the clip on the head of mixture needle is positioned on the center groove.

(2) Insert throttle cable and housing into rubber nipple on carburetor cap. Press throttle cable housing in until the end is in contact with the cap itself.

(3) Position spring on inside of cap such that the throttle cable is routed through the center. Compress spring into carburetor cap.

NOTE

Insure that throttle cable is seated within throttle handle (at control bar) prior to attaching cable to carburetor.

(4) Route throttle cable end into key-shaped hole in carburetor slide. Lock cable in place by sliding it into small end of key-shaped hole.

(5) Drop mixture needle into center hole and place locking plate over it. Insure that tab on locking plate faces down.

(6) Position slide in carburetor such that positioning groove on slide and locating pin in carburetor align.

(7) Release spring, insuring that it is centered in the slide. Screw cap in place on carburetor.

(8) Check to insure that slide rests on idle speed adjustment screw and that there is 1/8" of free play in throttle cable at handle.

K. Attach ignition wires to engine as follows (Figure 4-12):

(1) Plug ignition wires into electrical control box on engine. Use prongs highlighted in Figure 4-12.

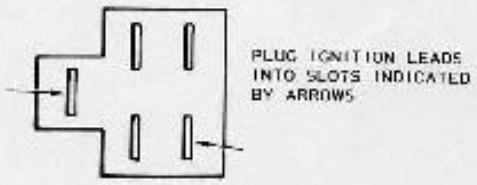
(2) Route both the throttle cable and ignition wires from their respective locations on the engine to the left upright support tube. Secure cable and wires to upright support tube with velcro wrap (FD-10301).

(3) Table 4-2 contains part ordering information and is provided for reference only.

TABLE 4-2
THROTTLE AND IGNITION COMPONENTS

Part Number	Qty	Nomenclature
FD-10307	1	Throttle Handle
FD-10276	1	Throttle Cable Assembly
FD-10308	1	Ignition Switch Assembly
FD-10301	5	Velcro Wrap

The ignition switch assembly is lightly bonded to the throttle handle at the factory. To interchange parts, gently work square base of switch away from grooved slot in handle.



Electrical Control Box on Engine
Figure 4-12

L. Front Support Tube (Figure 4-13)

(1) Position chafe tube (190) on front support tube (192). (Chafe tube (190) should be approximately 6" long.)

(2) Insert safety cable(191) into front support tube (192).

(3) Secure base plug (193) and end of safety cable (191) to front support tube (192) with bolt (194), washers (195) and nut (196). Tighten nut (196) securely.

(4) Secure second base plug (193) and opposite end of safety cable (191) to front support tube (192) with bolt (194), washers (195) and nut (196). Tighten nut (196) securely.

(5) Secure front support tube (192) to ATV brackets with pip pins attached to brackets.

M. Engine Starter Cord (Figure 4-13)

(1) Remove pull start handle from end of starter cord on engine. Maintain a POSITIVE hold on cord to prevent it from retreating into starter case.

(2) Place delrin spacer (197) on starter cord.

(3) Secure ring (198) to starter cord end.

(4) Secure starter cord extension (199) to ring (198) after routing starter cord through pulley.

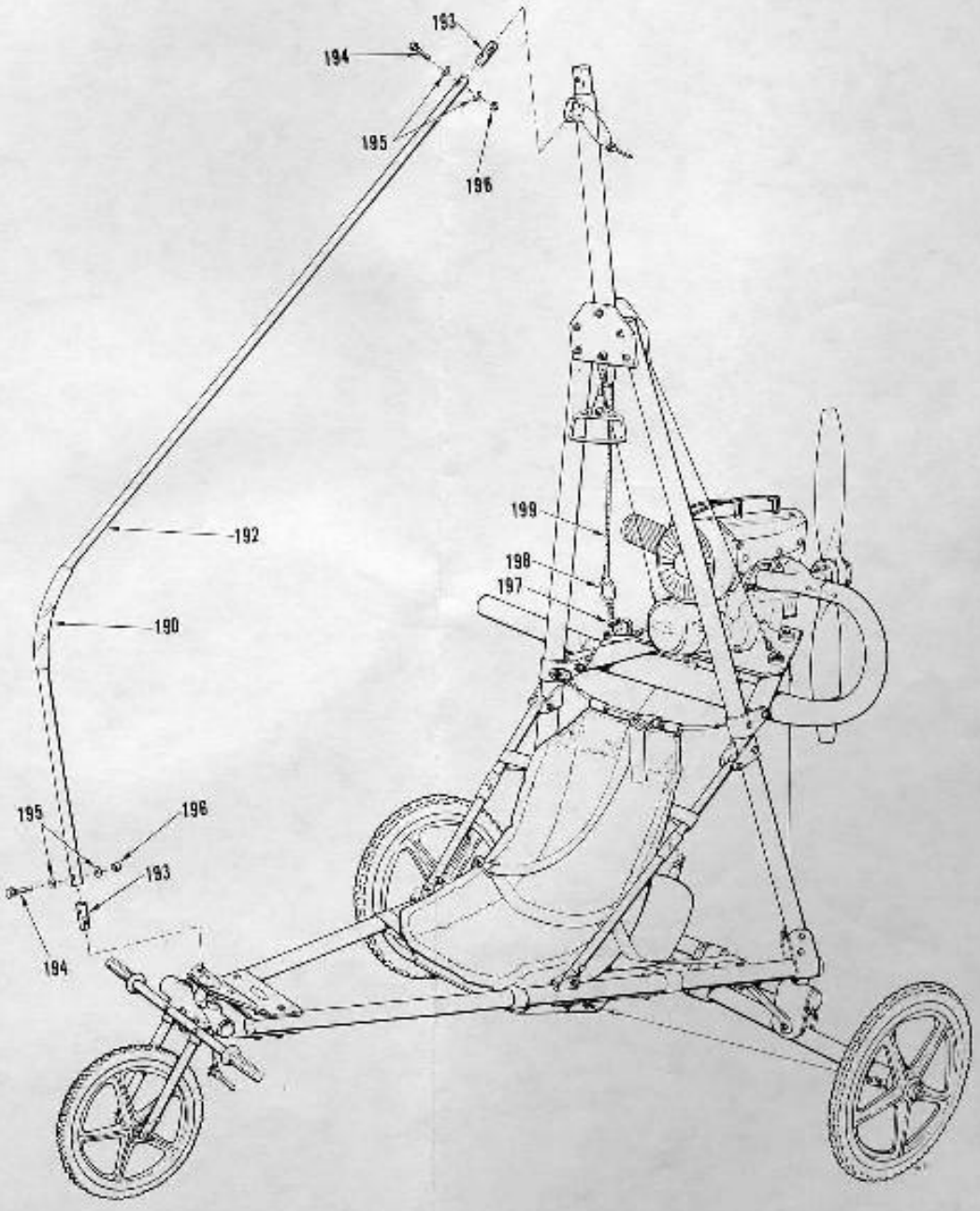
(5) Route starter cord extension (199) through upper pulley and secure starter handle to free end.

(6) Sear the ends of starter cord to prevent fraying.

KEY TO FIGURE 4-13

Index Number	Part Number	Qty	Nomenclature
190	FD-10290	1	Chafe Tube 6"
-191	FD-10244	1	Cable, Front Support Tube
192	FD-10243	1	Curved Front Support Tube
193	FD-10234-1	2	Base Plug
194	AN4-14A	2	Bolt
195	AN960-416	4	Washer
196	MS21083-N4	2	Elastic Stop Nut (Thin)
197	FD-10281	1	Delrin Spacer
198	FD-10293	1	Ring
199	FD-10303	1	Starter Cord Extension

- Item Not Illustrated



Front Support Tube Attachment
Figure 4-13