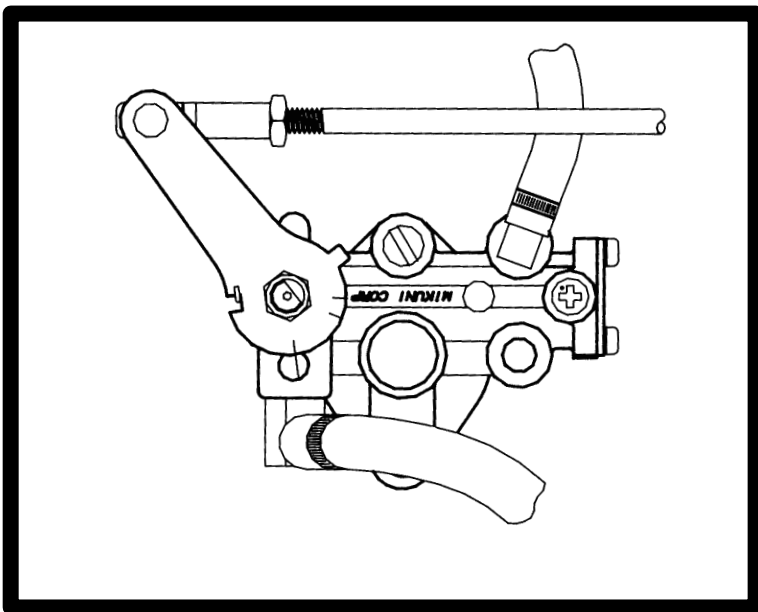




# OIL INJECTION SYSTEM



3

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# Table Of Contents

	<b>Page</b>
Operation of the Injection System .....	3C-1
Oil Pump Description .....	3C-1
Oil Pump Output Specifications .....	3C-1
Oil Injection Components .....	3C-2
Carburetor/Oil Pump Synchronization .....	3C-3
Bleeding Air from Oil Injection System .....	3C-3



## Operation of the Injection System

The oil injection system delivers an oil mixture, on engine demand, from 100 to 1 at idle to 50 to 1 at wide open throttle.

The oil reservoir holds 4.5 quarts of oil which will provide 4.5 hours of running time at wide open throttle.

A low oil warning horn will be activated when approximately 1/3 of oil remains in the reservoir. This will provide approximately one full gas tank of wide open throttle running.

The oil injection pump feeds oil into the fuel just before the fuel pump. The oil injection pump is driven by the crankshaft and is connected to the throttle linkage for metering the varied flow of oil per engine RPM.

## Oil Pump Description

There are two different pumps used on the Sport Jet product line. The lever can be used to identify which model the pump is calibrated for. The 90 HP is stamped with "90" on the pump lever. The 120 HP is stamped with "120" on the pump lever.

## Oil Pump Output Specifications

The following table lists the oil pump output capacity in cc per three minutes engine running time.

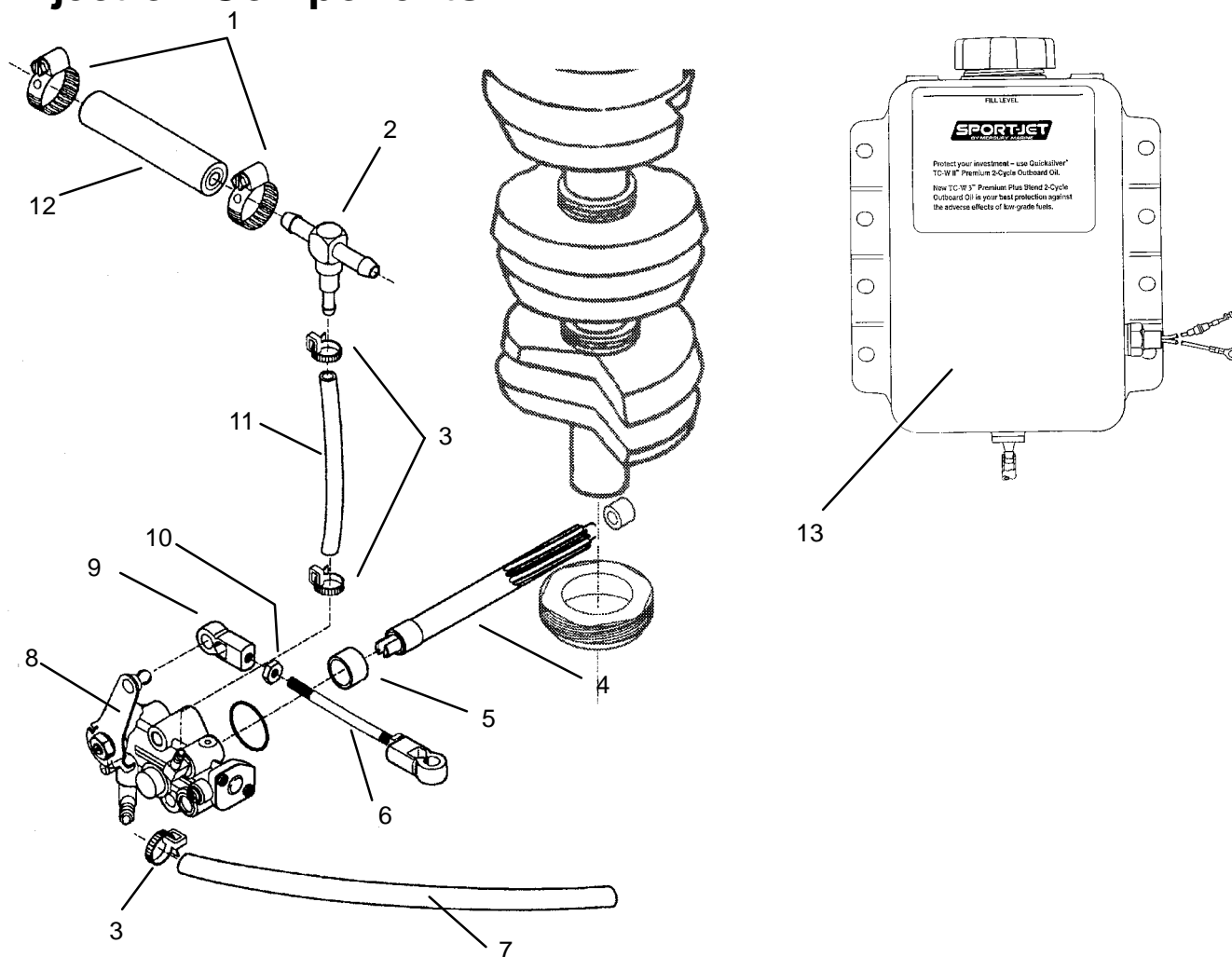
Lever Stamp ▶	"90"	"120"
Part Number	820658	819438
Volume @ Idle*	3.37 cc ± 10%	4.75 cc ± 10%
Full Volume**	11.25 cc ± 10%	14.25 cc ± 10%

\*1500 RPM w/ oil link rod attached = cc in 3 minutes

\*\*1500 RPM w/ oil link rod disconnected and pump arm rotated full clockwise and help against pump casting= cc in 3 minutes



# Oil Injection Components

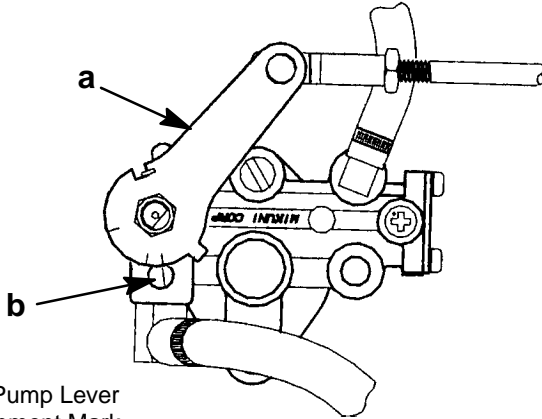


REF. NO.	PART NO.	QUAN.	DESCRIPTION	TORQUE		
				lb. in.	lb. ft.	N-m
1	54- F698772	2	Clamp			
2	21- 826122	1	Valve, Check			
3	54- 815504104	3	Sta-Strap			
4	F748316	1	Driven Gear			
5	23- 819743	1	Bearing			
6	826593	1	Link Rod			
7	32- 93370-70	1	Tubing (from Oil Tank - 48 in.)			
8	820658	1	Oil Pump (90 HP)			
	819438	1	Oil Pump (120 HP)			
9	817428	2	Socket			
10	11- 68219	2	Nut (10-32)			
11	32- 828217-13	1	Tubing (4 in. - cut as required)			
12	32- 827228-81	1	Hose (to fuel pump 2 3/4 in. - cut as required)			
13	1200- 820664--1	1	Oil Tank (3 qt. 7-1/2 in. high)			
	1200- 820664--2	1	Oil Tank (4 qt. 9-7/8 in. high)			



## Carburetor/Oil Pump Synchronization

1. Move towershaft to the Wide Open Throttle position. Inspect oil pump alignment mark with the oil pump lever. Adjust oil pump link rod to align with the last mark.

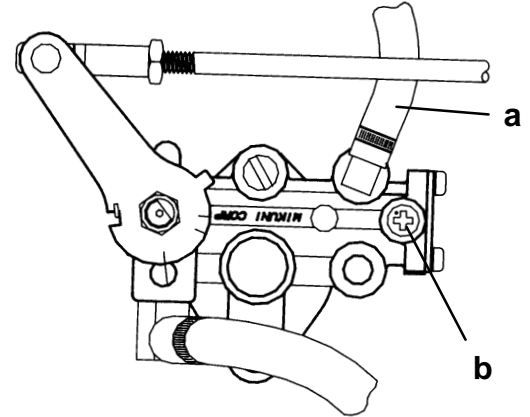


- a - Oil Pump Lever
- b - Alignment Mark  
(At Wide Open Throttle)

2. Adjust oil pump link rod as required.

## Bleeding Air from Oil Injection System

1. With engine not running, place a shop towel below the oil pump. Loosen bleed screw three to four turns and allow oil to flow from bleed hole until no air bubbles are present in inlet house. Torque bleed screw to 25 lb. in. (2.8 N·m). This procedure also allows the oil pump to fill with oil.



- a - Outlet Hose
- b - Bleed Screw

2. Purge air from outlet hose by running engine at idle speed until no air bubbles are present in outlet hose.