

SERVICE NEWS

DATE: 10/8/52 Revised 1/25/54 AIRCOOLED MOTORS INC.

NO. N-21

SUBJECT: USE OF SHELL T.C.P. CONCENTRATE IN MODEL 6A4-150, 6A4-165, 6V4-178, 6V4-200, 6A4-200 AND 6A8-215 SERIES ENGINES

The Shell Oil Company T.C.P. Concentrate has been tested in the subject model engines. It has been demonstrated that with high leaded fuels, the use of T.C.P. improves spark plug life and reduces spark plug fouling. Engines which have been dismantled after operating with fuel containing T.C.P. Concentrate have been inspected and no detrimental conditions have been observed. It is, therefore, recommended that T.C.P. Concentrate be blended with high leaded fuels when used in the subject engines.

The following is the recommended procedure prepared by the Aviation Department of Shell Oil Company for use of Shell T.C.P. Concentrate when used with mobile refuelers.

1. General:

The effectiveness of T.C.P. in reducing spark plug fouling is greatest when introduced into low-time engines (since last major or top overhaul) and the engines continue operation on T.C.P. treated fuel.

2. Blending:

Determine average lead content of fuel to be treated. The following table shows the quantities of Shell T.C.P. Concentrate which will treat various amounts of aviation gasoline (grades 80/87, 91/96 and 100/130). For example: two quarts of Shell T.C.P. Concentrate will treat 500 gallons of aviation gasoline, grades 91/96 and 100/130.

AMOUNT OF GASOLINE TREATED:

Use only as directed; excess quantities of T.C.P. Concentrate will not improve performance. The Concentrate should be well blended in the fuel prior to use. This can be accomplished by adding the required amount of T.C.P. to the refueler, prior to filling. The agitation of the filling will mix the T.C.P. and fuel. (For compartmented trucks, care should be taken to treat each compartment separately). If adding T.C.P. prior to filling is not practical, T.C.P. may be added after filling, and the mixing can be accomplished by recirculating the product through the truck pumping system.

- Spark Flugs: Install new or reconditioned spark plugs when use of T.C.F. is begun. Spark plug recesses should be cleaned out when plugs are changed.
- 4. Caution: Shell T.C.P. Concentrate should be handled and stored with the same care as avaition gasoline. It is flammable and should not be allowed to contact skin or eyes.

"SHELL TOP CONCENTRATE"
BLENDING TABLE
FOR AVIATION GASOLINE

GASOLINE QUANTITY TO SE TREATED U.S. GALLOMS)	CORRECT AMOUNT OF SHELL TOP CONCENTRATE				
	For 80	For 80/87 GRADE		For (91/96 GRADE 100/130	
	DINGES	CC'S or MILLILITERS	LIQUID OUNCES	CC'S or MILLILITERS	r
5-60 200	0.2	5	0.6	19	-
10	0.3	10	1.3	38	_
15	0.5	14	1.9	57	
20	0.6	19	2.6	76	
25	0.8	24	3.2	95	
30	1.0	28	3.8	114	
35	1.1	33	4.5	132	
40	1.3	38	5.1	150	
45	1.4	43	5.8	170	
50	1.6	#100 1 mg 47 mg m 2	6.4	190	
100	3.2	95	12.8	380	-
500	1 PINT	470	2 QUARTS	1900	

The amount of Shell T.C.P. Concentrate shown in the Table is to be blended into the gasoline. Then agitation is desirable to provide thorough mixing. The amounts shown in the Table have been found by experience to give the best results. Do not use more than the correct amount. This Table is correct only with Shell T.C.P. Concentrate. Correct amount may be measured either in liquid ounces (use left column under each fuel grade) or in cubic centimeters (use right column under each fuel grade). One milliliter, abbreviated "ml", is the same as one cubic centimeter, abbreviated "cc".