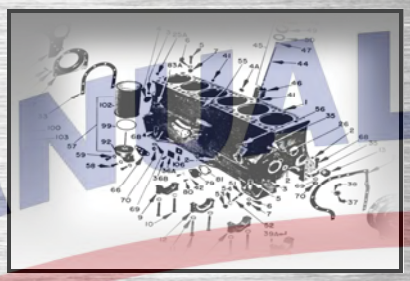

Galion

Service, Operator's, & Parts Manual

116 Motor Grader

S/N 11468 to 14331

JENSALES

Service, Operator's, & Parts Manual

GA-SOP-116

TABLE OF CAPACITIES AND ADVISED LUBRICANTS.

UNIT	CAPACITIES	TEMPERATURES			
		SUMMER ABOVE 90° F.	SPRING & FALL 90° TO 32° F.	MODERATE WINTER 32° TO 10° F.	WINTER 10°F. TO SUB-ZERO
CRANKCASE	18 US Qt.	SAE-30	SAE-20	SAE-10	10-W
FUEL INJECTION PUMP	7/8 US Pt.	SAE-30	SAE-20	SAE-10	10-W
COOLING SYSTEM	20 US Gal.	Use Clean Rain or Soft water	USE APPROVED ANTI-FREEZE. SEE PAGE No.		
ENGINE AIR CLEANER	4¾ US Pt.	SAE 30	SAE 20	SAE 10	3¾ US Pt. 10-W 1 US Pt. Diesel fuel
FUEL TANK	50 US Gal.	SEE DIESEL FUEL SPECIFICATIONS Page No.			
STARTING FUEL	1 US Gal.	USE HIGH-TEST			
TRANSFER DRIVE TRANSMISSION TANDEM DRIVE (EA.)	5 US Qt. 48 US Qt. 16 US Qt.	SAE-140	SAE-140	SAE-90	SAE-90
HYDRAULIC SYSTEM	28 US Gal.	SAE-10	SAE-10	SAE-10	10-W With 25% Diesel fuel
HYDRAULIC TANK AIR CLEANER	½ US Pt.	SAE-10	SAE-10	SAE-10	10-W With 25% Diesel fuel
MAGNETO DISTRIBUTOR BEARING		SAE-10 Or very light electric motor oil			
MAGNETO IMPULSE COUPLING		SAE-10 Or Very Light electric motor oil			KEROSENE

INDEX

OPERATION & MAINTENANCE SECTIONS

INDEX (CONTINUED)

OPERATION & MAINTENANCE SECTIONS

DIESEL FUEL SPECIFICATIONS (Cont.)

States and Canada, average 43 to 50 cetane. Fuels with ignition quality below 43 cetane are not very satisfactory for variable load operation, long standby idle performance, or cold engine operating conditions. Fuels with ignition quality below 40 cetane should not be used.

Since it is necessary for the fuel to remain fluid at all times, fuels with pour points at least 10° below atmospheric temperature are required for winter operation in sub-zero temperatures.

Consult your G.I.W. or IH dealer or qualified oil company representative when in doubt as to quality of fuel to use.

DO NOT USE DIRTY FUELS

Water, sediment or gum in the Diesel fuel may cause several difficulties in engine operation, such as clogging of filters; deposits on valve stems, piston rings and nozzles; varnish formations on fuel pump plungers, injection nozzles, valves and pistons, and may result in costly shutdowns. The supplier should be informed that the fuel is to be used for high speed Diesel engines and should assume the responsibility of supplying a Diesel fuel with satisfactory ignition qualities and cleanliness.

ENGINE SPECIFICATIONS

CAPACITIES (U.S. Measure) (Approximate)

Gasoline tank (Starting fuel--Gasoline cycle)	1 gal.
Crankcase oil pan	18 qts.
Injection pump housing	7/8 pt.
Cooling system	20 gals.
Air cleaner oil cup	4-3/4 pt.

ENGINE

Type	Diesel, 45-degree head.
Cylinders	6
Bore	4.4 in.
Stroke	5.5 in.
Engine speed (Governed)	1800 rpm.
Magneto	IH type F-6
Carburetor	1-1/4 in.
Air Cleaner (Donaldson)	9 in.
Fuel Injection Pump	IH
Valve clearance (Engine hot)	.017 in.
Spark plug gap	.020 to .025 in.
Clutch	Spring loaded 16 in.

ENGINE LUBRICATING OIL SPECIFICATIONS

Use only high quality lubricating oil. Engine lubricating oil should be of well refined petroleum oils, free from water and sediment, and without admixtures of fatty oils, acids, soaps, resins, or any other substance not derived from petroleum. Oil should not corrode any metal used in engine construction. Also, engine lubricating oil containing additive products not necessarily derived from petroleum, but being of non-corrosive type, is satisfactory.

This engine has a pressure feed lubrication system. A gear type oil pump circulates the lubricating oil under pressure to the crankshaft bearings, connecting rod bearings, camshaft bearings, valve mechanism and timing gears, thereby assuring positive lubrication of all parts.

Do not operate the engine for any length of time with the crankcase oil level below the low mark on the bayonet gauge.

Change oil after every 100 hours of operation. Drain the crankcase while the oil is warm so it will drain freely and completely.

HYDRAULIC SYSTEM OIL SPECIFICATIONS

Use a good grade of oil in Hydraulic System. It is suggested that a locally available, standard brand be selected and specified on reorders so uniformity of subsequent deliveries is assured.

The general characteristics of oil required for use in Hydraulic System are:

Use Oil only. DO NOT USE BRAKE FLUID IN HYDRAULIC SYSTEM.

Use clean oil of good quality. Store in clean containers. Keep covered.

Viscosity suitable for average temperature where grader will be working. See table in Lubrication Section.

In extreme cold it may be necessary to "cut" hydraulic oil with 25% diesel fuel oil.

Check pour point of oil at temperature where grader will be working.

STORAGE AND STARTING AFTER STORAGE

When the grader is to be idle for a period of time, it should be stored in a dry and protected place. To leave equipment outdoors exposed to the elements will result in materially shortening the life of the machine.

If grader is to be idle for 30 days or more, refer to Storage & Housing instructions in Maintenance Section

Exercise strict care in following instructions on starting engines taken from storage.

COLD WEATHER OPERATING INSTRUCTIONS ----- SEE PAGE 16

HOT WEATHER OPERATING INSTRUCTIONS ------ SEE PAGE 17