GENERAL DATA
(SERIES "TF")

ENGINE TYPE	XPAG/TF (commencing No. 30301).
Number of cylinders	Four.
Capacity	1250 c.c. (76¼ cu. in.).
B.H.P.	57 at 5,500 r.p.m.
Bore	66·5 mm. (2·618 in.).
Stroke	90 mm. (3·543 in.).
R.A.C. rating	10·97 h.p.
Compression ratio	8 to 1.
System of cooling	Thermo-siphon—pump and fan assisted.
Radiator hose top	Length 4 5/16 in. (10·95 cm.). Diameter 1½ in. (3·8 cm.).
Radiator hose bottom	Length 2¼ in. (5·71 cm.). Diameter 1⅛ in. (2·86 cm.).
First oversize bore	+·020 in. (·50 mm.). Actual bore 2·6381 in. (67 mm.).
Second oversize bore	+·040 in. (1·00 mm.). Actual bore 2·6581 in. (67·5 mm.).
Firing order	1–3–4–2.
Piston clearance at pressure face below oil ring	·0021 in. to ·0029 in. (·056 mm. to ·071 mm.).
Ring gap	·006 in. to ·010 in. (·152 mm. to ·254 mm.).
Number of compression rings	Two.
Width of compression rings	2·25 mm. (·0885 in.).
Number of oil rings	One.
Width of oil ring	4·0 mm. (·1575 in.).
Oil pressure relief valve operates	50 to 70 lb. per sq. in. (3·5 to 5·0 kg./cm.²).
Oil pressure (normal)	40 to 45 lb. per sq. in. (2·8 to 3·2 kg./cm.²).
Gudgeon pin type	Clamped.
Gudgeon pin diameter	·7087 in. +·0004 in. +·0006 in. 18 mm. +·010 mm. +·015 mm.
Fit in piston	Double thumb press.
Fit in connecting rod	Clamped.
Crankpin diameter (standard)	1·772 in. (45 mm.).
Crankpin minimum diameter for regrind	1·722 in. (43·75 mm.).
Connecting rod—length between centres	7·008 in. (178 mm.).
Connecting rod—type of bearing	Shimless, steel-backed, white-metal-lined.
Connecting rod—side clearance	·004 in. to ·006 in. (·10 mm. to ·15 mm.).
Connecting rod—diametrical clearance	·0005 in. to ·002 in. (·011 mm. to ·056 mm.).
Number of crankshaft bearings	Three.
Type of main bearings	Shimless, steel-backed, white-metal-lined.
Standard main journal diameter	2·047 in. (52 mm.).
Main journals first regrind diameter	2·027 in. (51·49 mm.).
Main journals second regrind diameter (minimum)	2·007 in. (50·98 mm.).
Main bearings—length	Front 1·496 in. (38 mm.). Centre 1·496 in. (38 mm.). Rear 1·575 in. (40 mm.).
Centre main bearing—end clearance	·0014 in. to ·0037 in. (·035 mm. to ·095 mm.).
Main bearings—diametrical clearance	·0008 in. to ·003 in. (·020 mm. to ·075 mm.).
Crankshaft—end thrust taken on	Centre bearing.
Number of camshaft bearings	Three.
Type of camshaft bearings	White metal (front). Zinc alloy (rear and centre).

GENERAL DATA—*continued*

Camshaft—bearing clearance			Front ·0016 in. to ·004 in. (·04 mm. to ·10 mm.). Rear and centre ·0018 in. to ·0037 in. (·045 mm. to ·095 mm.).
Camshaft—end thrust taken on			Front end.
Camshaft—end float			·005 in. to ·013 in. (·125 mm. to ·325 mm.).
Camshaft—drive (type)			Duplex chain, $\frac{3}{8}$ in. pitch, 60 pitches, endless.
Valve timing markings			White chain links and "T" marks on wheels.
Exhaust valve throat diameter			1·126 in. (28·6 mm.).
Exhaust valve diameter			Head 1·338 in. (34 mm.); Stem ·315 in. (8 mm.).
Inlet valve throat diameter			1·274 in. (32·6 mm.).
Inlet valve diameter			Head 1·417 in. (36 mm.); Stem ·315 in. (8 mm.).
Valve seat angle			30°.
Tappet type			Hollow.
Valve lift—inlet			·315 in. (8 mm.).
Valve lift—exhaust			·315 in. (8 mm.).
Inlet valve opens			5° before T.D.C.
Inlet valve closes			45° after B.D.C.
Exhaust valve opens			45° before B.D.C.
Exhaust valve closes			5° after T.D.C.
Valve spring pressure—shut	Inner	41·1 lb. at 1·753 in. (18·64 kg. at 4·453 cm.).	Total 114·35 lb. (51·87 kg.)
	Outer	73·25 lb. at 1·847 in. (33·23 kg. at 4·692 cm.).	
Valve spring pressure—open	Inner	55 lb. at 1·438 in. (24·95 kg. at 3·678 cm.).	Total 150 lb. (68·04 kg.)
	Outer	95 lb. at 1·532 in. (43·09 kg. at 3·89 cm.).	
Inlet valve opens—piston traverse			·009 in. (·23 mm.).
Inlet valve working clearance (hot)			·012 in. (·30 mm.).
Exhaust valve working clearance (hot)			·012 in. (·30 mm.).
Valve guides			Removable.

FUEL SYSTEM

Fuel tank reserve level	Warning light on panel.
Fuel delivery	S.U. electric pump.
Carburetters	S.U. semi-downdraught.
Carburetter needles	Standard—G.J. Rich—H.I.—Weak—G.L.

CLUTCH

Type	Borg & Beck 8 in. (20·3 cm.) diameter. Dry plate.
Facing	Woven yarn type.

GEARBOX

Synchromesh: Second, third and top.

Ratios:

	Gearbox	*Overall* 8/39
Top	1·00	4·875
Third	1·385	6·752
Second	2·07	10·09
Bottom	3·5	17·06
Reverse	3·5	17·06

FRONT SUSPENSION AND STEERING

Camber (static position)	1° positive (tolerance ± 1°).
Castor angle	2° ± $\frac{1}{2}$° with side-members parallel to road.
Toe-in	Nil.
King-pin inclination	9° to 10$\frac{1}{2}$° full bump.

GENERAL DATA—*continued*

Track (disc wheels)	Front 47⅜ in. (1·203 m.). Rear 50 in. (1·27 m.).
Track (wire wheels)	Front 48 3/16 in. (1·224 m.). Rear 50 13/16 in. (1·29 m.).
Turning circle	31 ft. 3 in. (9·525 m.).
Wheelbase	7 ft. 10 in. (2·388 m.).
Tyre size	5·50—15.
Tyre pressures	18 lb. per sq. in. (1·27 kg./cm.²).

REAR AXLE

Type of axle	Semi-floating.
Type of drive	Hypoid.
Ratio	8/39 = 875 : 1. Alternative ratios 4·55 : 1 and 5·125 : 1.
Adjustment	By spacers and special fixtures.

BRAKES

Type	Lockheed hydraulic two leading shoe (front) (9 in. dia.).
Type of linings	Ferodo DM.7.
Lining size—front	8·75 in. × 1·5 in. × ·187 in. (22·22 cm. × 3·81 cm. × ·47 cm.).
Lining size—rear	8·75 in. × 1·5 in. × ·187 in. (22·22 cm. × 3·81 cm. × ·47 cm.).
Number of rivets	Twelve per lining.

SPRINGS (front)

Type	Coil.
Free length	9·59 in. ± 1/16 in. (24·36 cm. ± 1·58 mm.).
Mean coil diameter	3·238 in. (8·24 cm.).
Number of effective coils	7·5.
Diameter of wire (ground)	·498 in. (11·27 cm.).
Maximum deflection	4·24 in. (10·78 cm.).

SPRINGS (rear)

Type	Half-elliptic.
Length	42½ in. (107·95 cm.).
Width	1½ in. (3·81 cm.).
Number of leaves	Seven.
Thickness of leaves	7/32 in. (5·56 mm.).
Camber (free)	2·85 in. (7·24 cm.).
Working load	397 lb. at nil camber.

HYDRAULIC DAMPERS

Type	Girling or Armstrong.

ELECTRICAL

Distributor rotation	Counter-clockwise.
Automatic advance	25° on crankshaft at 3,100 r.p.m.
Contact breaker gap	·014 in. to ·016 in. (·36 mm. to ·40 mm.).
Sparking plug	Champion NA.8 (standard equipment) (14 mm.), ¾ in. reach.
Sparking plug gap	·020 in. to ·022 in. (·50 mm. to ·56 mm.).
Ignition timing	T.D.C. (full retard).
Charging system	C.V.C.
Battery	Lucas GTW9A2, 51-amp. at 10 hours. 12-volt. Positive earth return.

GENERAL DATA—*continued*

CAPACITIES

Sump	10½ pints (12·6 U.S. pints ; 5·96 litres).
Gearbox	1¼ pints (1·5 U.S. pints ; ·71 litre).
Rear axle	2¼ pints (2·7 U.S. pints ; 1·3 litres).
Cooling system	10¼ pints (12·3 U.S. pints ; 5·7 litres).
Brake fluid	1 pint (1·2 U.S. pints ; ·57 litre).
Fuel tank	12 gallons (14·4 U.S. gallons ; 54 litres).

GENERAL DIMENSIONS

Length	147 in. (3·74 m.).
Width	59¾ in. (1·518 m.).
Height	52½ in. (1·34 m.).
Ground clearance	6 in. (15·24 cm.).
Turning circle R.H.	31 ft. 3 in. (9·525 m.).
Turning circle L.H.	31 ft. 3 in. (9·525 m.).
Weight (unladen)	17 cwt. 1 qr. (1,932 lb.) (878 kg.).
Weight (laden and with two passengers)	22 cwt. (2,464 lb.) (1120 kg.).

TORQUE SPANNER DATA

Cylinder head stud nuts	600 lb. ins. (6·9 m./kg.).
Connecting rod big-end bolts (to next split pin hole)	320 lb. ins. (3·7 m./kg.).
Main bearing cap nuts (to next split pin hole)	750 lb. ins. (8·6 m./kg.).
Steering wheel attachment nut	500 lb. ins. (5·75 m./kg.).