

Burton replacement front cover with cartridge water pump

Important Note:-

This information was gathered from a single installation and should be used as a guide only. The fan hub position must be checked for pulley alignment and bolt clearance. Illustration is from Elan Workshop Manual and does not show Burton Castings or Pump Cartridge.

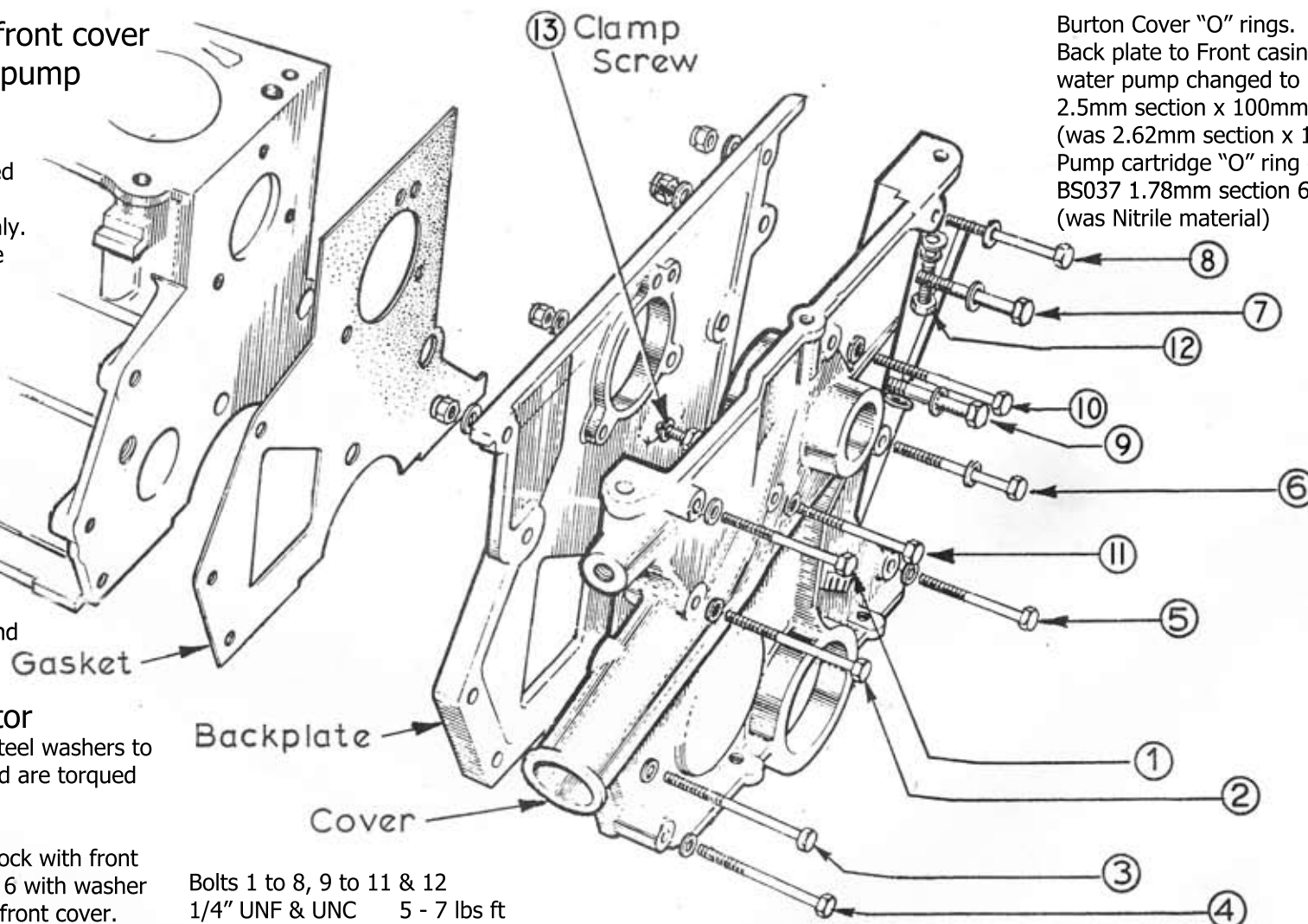
Gasket sealants
Welseal on both sides of paper backplate gasket. Loctite silicone sealant used on backplate to front cover central face by "O" ring, both outer edges and water pump module flange.

Elan S4 with Alternator

Note:- All bolts heads have steel washers to protect casting spot faces and are torqued to Lotus settings.

Alternator bracket bolts to Block with front mounting under head of bolt 6 with washer spacer between bracket and front cover. Reinforcement plate on rear of back plate under nuts of bolts 6, 7 & 8. Fan belt adjuster fits to bolt 7 with washer spacer between adjuster and front cover. File clearance around spot face of bolt 7 for adjuster to pivot.

Check for clearance of timing chain to inside of cover by jackshaft & tensioner. Also side of chain to cast rib near pad. Fan pulley hub pressed 0.185" further than flush to align fan pulley with crank pulley. Bolts 9, 10 & 11 must have low heads to clear back of fan pulley.



Burton Cover "O" rings.
Back plate to Front casing "O" ring around water pump changed to 2.5mm section x 100mm bore Viton (was 2.62mm section x 101.27 mm bore Nitrile)
Pump cartridge "O" ring changed to BS037 1.78mm section 63.22mm bore Viton (was Nitrile material)

Bolts 1 to 8, 9 to 11 & 12
1/4" UNF & UNC 5 - 7 lbs ft
5/16" UNF & UNC 10 - 15 lbs ft

Edge bolts

Anti-clockwise from top left.

1. 1/4" UNC x 2" Cap Head, Plain Washer
2. 1/4" UNC x 2 1/4" Cap Head, Plain Washer
3. 1/4" UNC x 2 1/2" Cap Head, Plain Washer
4. 1/4" UNC x 2 1/4" Cap Head, Plain Washer
5. 1/4" UNC x 2 1/2" Cap Head, Plain Washer
6. 1/4" UNC x 3" Cap Head & Nyloc, 3x Plain Washer
7. 5/16" UNF x 2 1/4" Hex Head & Nyloc, 3x Plain Washer
8. 1/4" UNC x 2 1/2" Cap Head Nyloc, Plain Washer

Water Pump bolts

- Note: use Copper Slip on threads & shank
9. 5/16" UNC x 2 1/4" Torx with wave washer (Harley Davidson P/N 4232 Grade 8 5/16"-18 x 2-3/4" Torx head button screws cut down to 2 1/4")
 10. 1/4" UNC x 2 1/4" Torx with wave washer
 11. 1/4" UNC x 2 1/4" Torx with wave washer (Harley Davidson P/N 946 Grade 8 1/4"-20 x 2-1/4" Torx head button screws)

Cover to Head

12. 5/16" UNC x 1" Hex Head

Back Plate to Block Clamp Screw

13. 1/4" UNC x 3/4" Hex Head 6 - 8 lbs ft

G Bailey 2/6/2020
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