

Technical Service Bulletin No. TM0309

Date: 27th March 2001

Subject: Hydraulic Starter System – Replacement of HP3 hand pump.

Applicable to: All hydraulic starter systems manufactured by:

Bryce Berger Ltd
Bryce Ltd
Lucas Bryce Ltd
Lucas Marine Ltd
Lucas Electrical Heavy Duty Ltd
Prestolite Electric Ltd

Hand Pump Service Kit p/n 6518-25

1) Introduction.

A new type of combined hand pump, feed tank & pressure gauge assembly has been introduced to replace the original separate hand pump, feed tank and pressure gauge. The separate hand pumps types HP1, HP2 & HP3, feed tanks type FT6, FT7, FT8 & FT9 and pressure indicators PI1, PI2, PI3, PI4 & PI5 are replaced with the above service kit. The 6518-25 service kit includes a new control panel backing plate to enable the existing accumulator & relay valve to be retained.

2) Contents of the 6518-25 Service Kit

- a) Backing plate fitted with new type hand pump/feed tank/pressure gauge assembly.
- b) Packing strips, fixing bolts, spring washers & plain washers for mounting accumulator.
- c) Pipe – relay valve to feed tank.
- d) Pipe – relay valve to base of hand pump.
- e) Stud coupling – 10mm relay valve.
- f) Stud coupling – 6mm relay valve.
- g) Plug & washer for relay valve.
- h) Service instruction book.

3) Fitting Instructions

a) Before dismantling any part of the system release the pressure by operating the relay valve lever. Then drain the feed tank by disconnecting the pipe from the relay valve to the starter tee piece placing a clean container at the base of the pipe, next pump the hand pump until the system is empty. Remove the pipe to the starter from the relay valve & put it to one side until you refit the control panel to the engine.

b) Remove the control panel assembly and place on a clean workbench. Remove the accumulator assembly and relay valve, check the units for damage or leaks and clean using only clean diesel oil. Do not use paraffin (kerosene) as this can contain water which may cause corrosion.

Put the new panel on the workbench. On older systems fitted with imperial sized pipe work, remove the 3/8" stud coupling & the 1/4" stud coupling from the right/hand pump side of the relay valve and replace with the 10mm & 6mm stud couplings contained in the service kit.

Remove the 1/4"/6mm stud coupling & pipe to the pressure indicator & replace with the blanking plug & washer contained in the service kit.

c) Fit the accumulator assembly and relay valve to the new backing plate using the new packing strips, fixing bolts, spring and plain washers. Make sure that the packing strips are fitted underneath the accumulator fixing brackets.

Connect the 10mm pipe from the relay valve to the feed tank.

Connect the 6mm pipe between the relay valve and the base of the hand pump.

Ensure that all couplings are tightened so that they do not leak.

d) Fit the new assembled control panel assembly to the original mounting brackets on the engine and reconnect the pipe from the relay valve to the starter.

Refill with hydraulic oil to the indicated level.

Vent the system as instructed in the service instruction book.

4) Drawings

- a) Photographs:
- 1) Old control panel
 - 2) Hand Pump Service Kit
 - 3) Existing accumulator/relay valve assembled with service kit

Old design control panel with HP3 Hand pump.



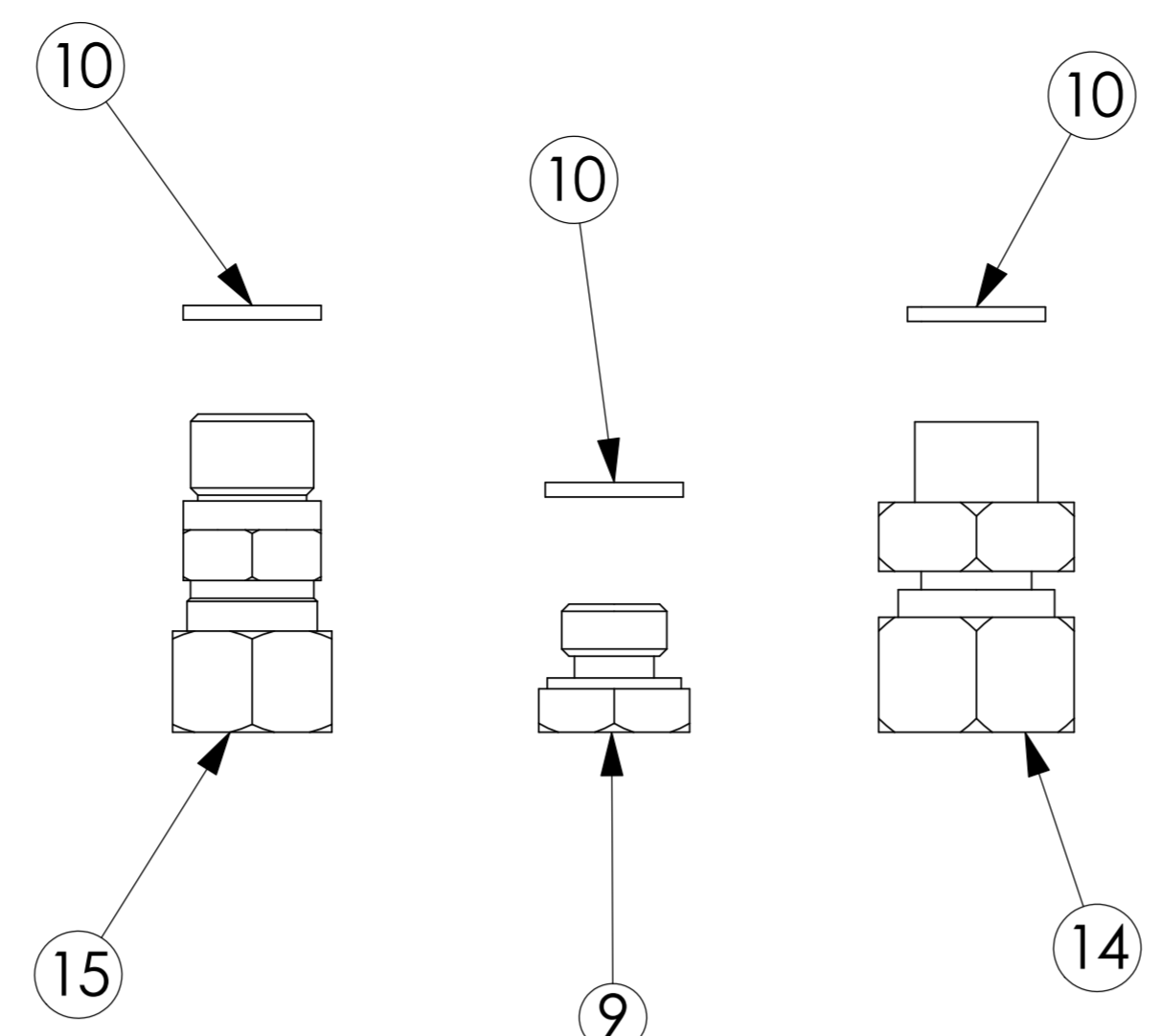
New combined hand pump / feed tank / Pressure gauge on new back plate.
(Service kit p/n 6518-25)



Original accumulator & relay valve fitted to new panel.



ITEM No.	PART No.	QUANTITY	DESCRIPTION
	REF. ONLY		
1	6518-1	1	BACK PLATE
2	6518-35	1	HAND PUMP ASSEMBLY ②
3	6518-4	1	PIPE
4	6518-3	1	PIPE
5	6518-2	2	PACKING STRIP
6	NW 1-27ZI	4	PLAIN WASHER
7	5001-26	4	SPRING WASHER
8	MM313-606	4	CAPSCREW
9	MM526-22	1	PLUG
10	MM526-12	3	WASHER
11	MM208-5	4	PLAIN WASHER
12	853134	4	SPRING WASHER
13	MM295-510	4	BOLT
14	MM428-M1004	1	10mm STUD COUPLING
15	47200745	1	6mm STUD COUPLING



VIEW SHOWING FITMENTS REQUIRED TO ALLOW CONNECTION OF RELAY VALVE TO NEW HANDPUMP SCALE : FULL SIZE

NOTES:-

- ITEMS 3,4,9,10,14 & 15 TO BE SUPPLIED LOOSE
- ASSEMBLY TO BE SPRAYED ALL OVER TO SPEC. E190 MASK GAUGE FACE, HANDPUMP PISTON, PIPE COUPLINGS AND DIP-STICK HANDLE.
- THE INDIVIDUAL PART Nos. INCLUDED ON THIS DRAWING ARE FOR REFERENCE PURPOSES ONLY. THE COMPONENTS MAY NOT BE ORDERED INDIVIDUALLY UNDER THIS PART No.

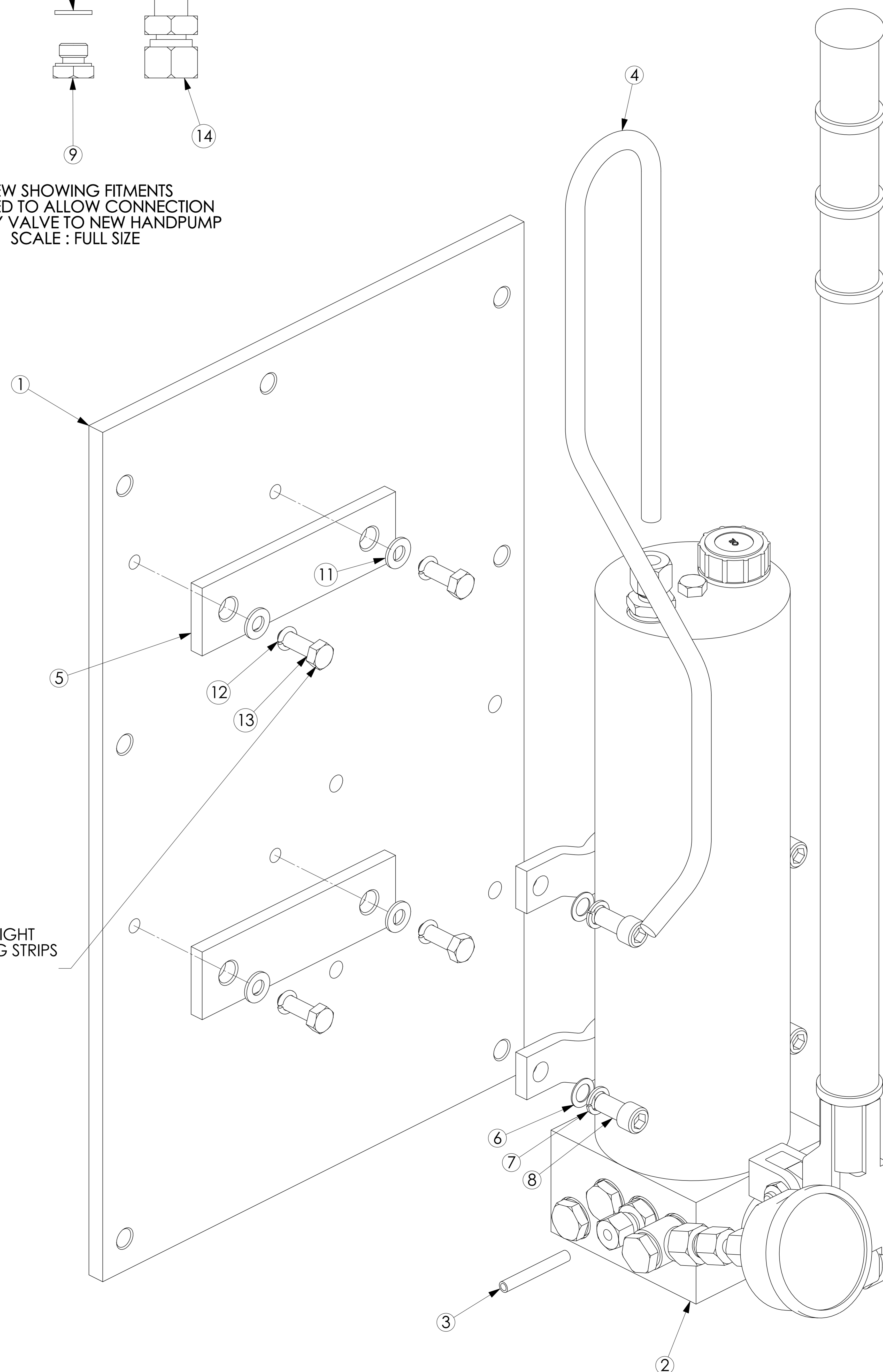
REMOVE EXISTING 10mm COUPLING & COPPER WASHER. REPLACE WITH ITEMS 10 & 14

REMOVE EXISTING 6mm COUPLING & COPPER WASHER REPLACE WITH ITEMS 10 & 15.

REMOVE PRESSURE GAUGE COUPLING AND PLUG WITH ITEMS 9 & 10

SCRAP VIEW ON ASSEMBLED R.V. SHOWN FOR REFERENCE ONLY ITEMS 9,10,14 & 15 TO BE FITTED BY CUSTOMER SCALE : FULL SIZE

ASSEMBLE FINGER TIGHT TO RETAIN PACKING STRIPS 4 POSITIONS



CAD GENERATED DRAWING DO NOT ALTER MANUALLY

MATERIAL SEE TABLE

HEAT TREATMENT

FINISH SEE NOTES

DRAWN A.D.F. CHECKED

APPROVED DATE 27/03/01

SCALE 1:1 DO NOT SCALE



SUPERSEDES

SIMILAR TO

REF DRG No.

FIRST USED ON

DIMENSIONS IN MILLIMETERS REMOVE SHARP EDGES TOLERANCES, UNLESS OTHERWISE STATED:- LINEAR ±0.25 ANGULAR ±1/2

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TITLE
**HANDPUMP/
BACKPLATE
SERVICE KIT**