zwicky
TRACK TOOLS

rail@arbil.co.uk
Tel: +445 (0) 845 600 4332

USER HANDBOOK

Z-UHB-042
ISSUE 4

HYDRAULIC TRACK JACKS

MODELS

F.805/B, F805/BR, F.805/50, F.1054, F.1527

1. LEADING PARTICULARS

Model Number	F.805B		F.805BR		F.805/50		F.1054		F.1527	
Number of Rams	1		1		1		2		1	
Closed Height	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins
Head	235	$9^1/_4$	235	$9^1/_4$	235	$9^1/_4$	95	$3^3/_4$	343	$13^1/_2$
Toe	82.5	$3^1/_4$	95	$3^3/_4$	50	2			190.5	$7^1/_2$
Capacity										
Head	8 tons		8 tons		8 tons		10 tons		20 tons	
Toe	5 tons		5 tons		5 tons				15 tons	
Hydraulic Lift	90	$3^1/_2$	90	$3^1/_2$	90	$3^1/_2$	101.6	4	152.4	6
Extended Height										
Head	325	$12^3/_4$	325	$12^3/_4$	325	$12^3/_4$	197	$7^3/_4$	495	$19^1/_2$
Toe	171.45	$6^3/_4$	184	$7^1/_4$	140	$5^1/_2$			343	$13^1/_2$
Weight	Kgs	lbs	Kgs	lbs	Kgs	lbs	Kgs	lbs	Kgs	lbs
	20	44	18.5	41	18.5	41	16.5	36	36	79

Recommended hydraulic fluid - SHELL TELLUS 37 or equivalent

WE DECLARE THAT THE DESCRIBED EQUIPMENT MEETS THE REQUIREMENTS OF THE MACHINERY DIRECTIVE AS LAID DOWN IN THE
SUPPLY OF MACHINERY (SAFETY) REGULATIONS 2008 No. 3073 AND THE
SUPPLY OF MACHINERY (SAFETY) (AMENDMENT) 2011 No. 2063

2. HYDRAULIC CIRCUIT

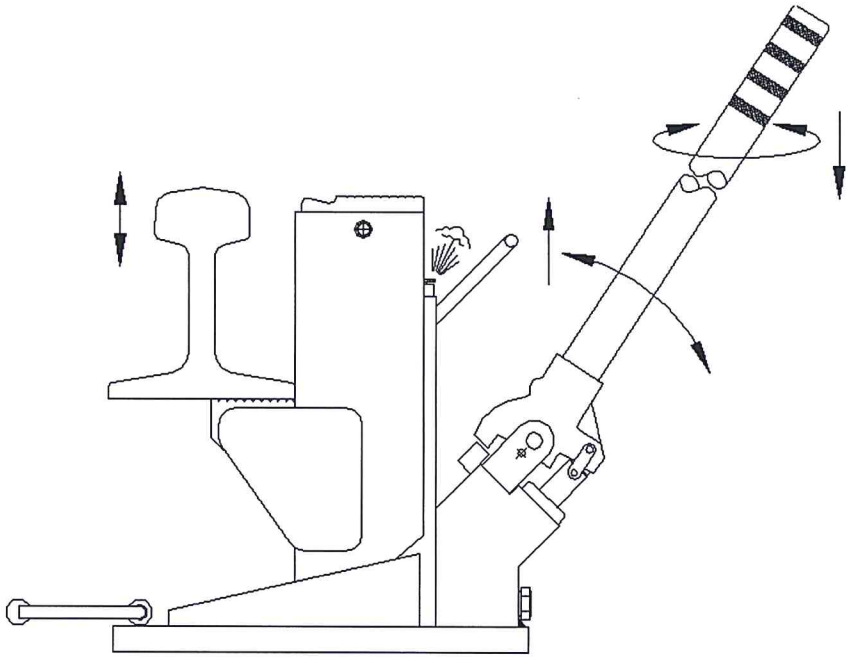
The hydraulic principal embodied in the jack consists of a reservoir containing oil at normal pressure and a cylinder into which this oil is forced under pressure by means of a pump, causing the ram(s) to rise, when the release valve is closed.

Arbil Limited

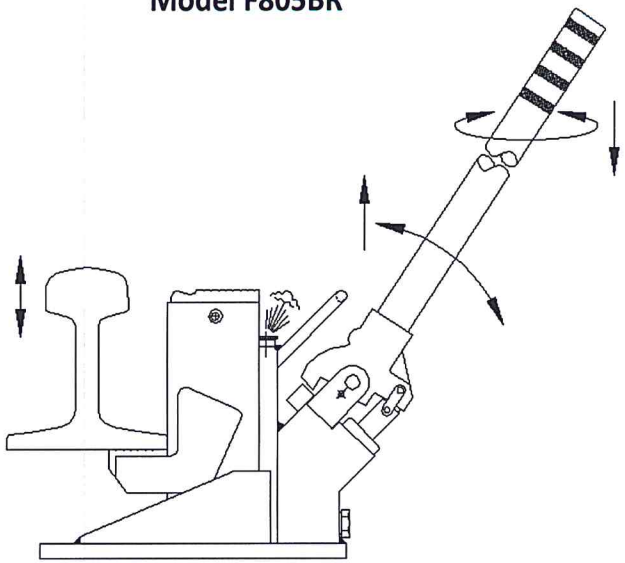
ZWICKY TRACK TOOLS

USER HANDBOOK
Z-UHB-042
ISSUE 4

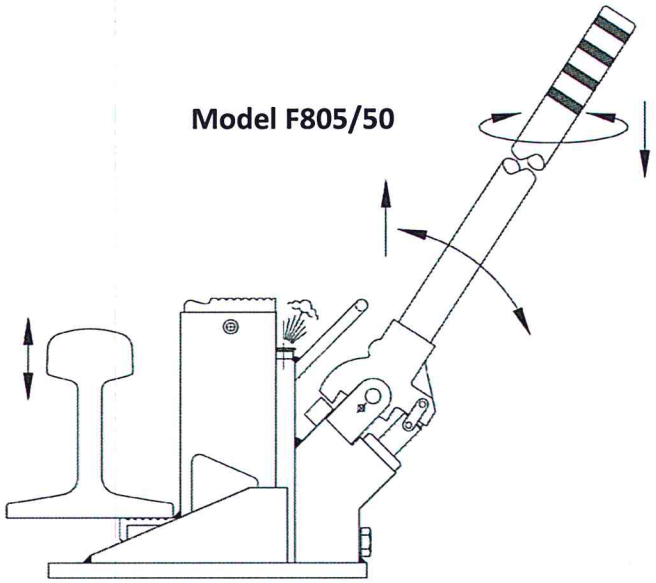
Model F1527



Model F805BR



Model F805/50



Arbil Limited
ZWICKY TRACK TOOLS
USER HANDBOOK
Z-UHB-042
ISSUE 4

A suction, non-return, ball valve is positioned between the reservoir and the pump. When the pump plunger is withdrawn by raising the pump handle, the suction valve is raised from its seating and fluid is drawn from the reservoir into the pump chamber, passing through a fine mesh filter. Drillings connect the pump to the pressure cylinder and here is installed a delivery ball valve.

When the pump is depressed the suction valve closes, the delivery valve opens and oil is delivered under the ram(s) in the cylinder. Immediately the pump stroke is completed, the delivery valve closes and the suction valve opens, the operation of the pump continues until the ram is at the desired height.

To lower the ram(s), the release valve is opened and oil is allowed to return from the cylinder to the reservoir.

An overload valve is fitted and relieves excess pressure in the cylinder, should an attempt be made to exceed the safe working load. The overload valve is preset during testing procedures and before despatch to Client at **105% of Safe Working Load**. No attempt should be made to adjust the valve. Unauthorised tampering with this valve will render the Test Certificate and Warranty null and void. If at fault DO NOT USE, withdraw from service and consult your original supplier.

3. OPERATION

3.1 The unit should be examined every time before using, in particular looking for signs of damage and fluid leaks. When necessary repairs are required, DO NOT USE, return to original supplier.

3.2 Place the pump handle in the socket on the jack and rotate it clockwise to close the release valve.

3.3 Open the air valve about 2 turns to allow the jack to "breathe" on *F805* and *F1527* models only.

3.4 Operate the pump handle to raise the load.

3.5 When the track maintenance has been completed, lower the jack rams by turning the pump handle anti-clockwise. The amount of rotation governs the rate of descent. On *F.1054* depress air filler screw plunger to release excess air pressure from reservoir on removal of jack from rail.

3.6 Before storing the jack, close the release valve and air valve to prevent leakage.

3.7 When not in use, the ram should be fully retracted.

If the unit has been in store or not used for a long period of time, oil may seep past the seals giving the appearance that the seals are leaking as the ram is extended. With further use no leakage will be noticeable.

4. MAINTENANCE

The unit should be examined every time before using, in particular looking for signs of damage and fluid leaks. When necessary repairs are required, DO NOT USE, return to original supplier.

4.1 TO FILL RESERVOIR AND CHECK FLUID LEVEL

The fluid level in the reservoir should be maintained at about ½ inch (13mm) below the level of the filler hole when the ram is fully retracted and its base is horizontal.

The reservoir should be filled as follows:

4.1.1 Remove the filler screw and insert a small funnel in the filler screw hole.

4.1.2 Slowly pour the fluid into the reservoir until the required level is reached. Refit the filler screw.

4.1.3 Open the release valve and gently operate the pump to expel all air from the fluid ways.

4.2 Lubrication

Recommended hydraulic fluid - Shell Tellus 37 or equivalent

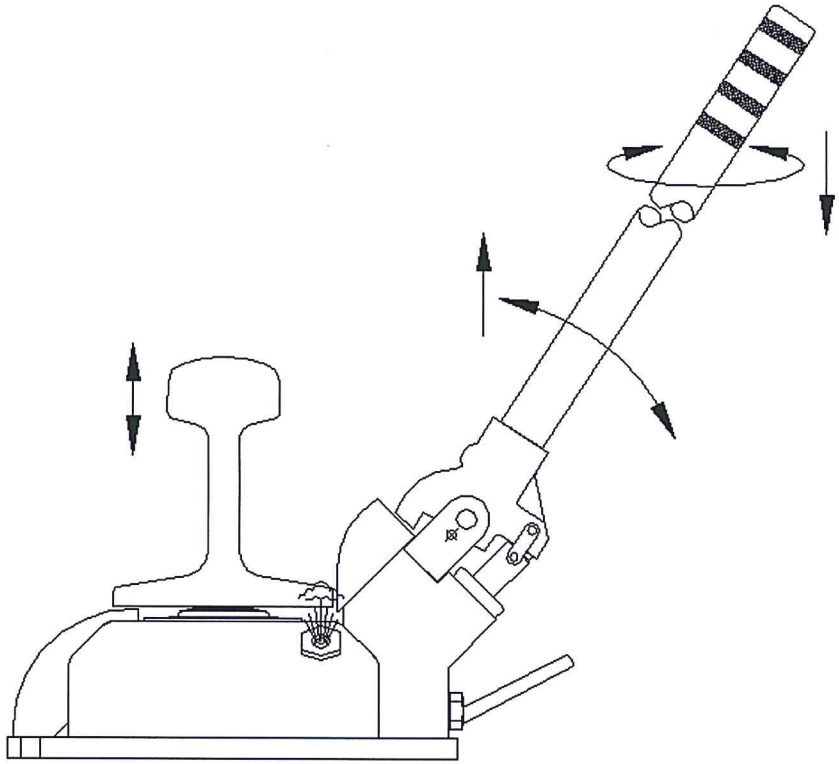
4.2.1 The moving parts of the unit should be periodically lubricated with hydraulic oil and the ram should be greased before storing for any length of time.

WHEN NOT IN USE THE RAM SHOULD BE FULLY RETRACTED.

If the unit has been in store or not used for a long period of time, oil may seep past the seals giving the appearance that the seals are leaking as the ram is extended. With further use no leakage will be noticeable.

Arbil Limited
ZWICKY TRACK TOOLS
USER HANDBOOK
Z-UHB-042
ISSUE 4

Model F1054



RAILWAY TRACK JACK
MODELS: F805
F1054
F1527
Track Aliner

1) INTRODUCTION

This specification defines the testing to be carried out on all new and repaired railway track jacks as part of the final inspection prior to delivery. Test requirements on drawings or other specifications for a specific jack will have priority over the requirements of this specification. Testing to be carried out using 20 ton or 50 tonne test rig.

2) PREPARATION

Prior to the application of the test loads the equipment is to be checked that:-

2.1 The jack structure and hydraulics are complete.

2.2 With no load on the jack, check operation and ensure no air is trapped within the hydraulic system. (See para 3.4).

2.3 With ram(s) fully retracted top-up hydraulic reservoir, if necessary.

3) TESTING

3.1 Close overload valve by screwing adjuster inwards. Operate against a load of 125% of the safe working load and check that the jack will hold load with no sinkage of the ram(s) for 10 minutes. For the F1054 jack, this will be with the top ram working. Load to be applied to the head.

3.2 Set overload valve to off-load between 105 and 110% of the safe working load. For F1054, this must be carried out with the top ram working (i.e. extended height 6.75 inch approx.).

3.3 Check that the ram(s) retract smoothly when the release valve is opened. The retraction of the rams may be assisted with a force not exceeding 30 pounds.

3.4 F805, F1527 & Track Aliner.
Check operation of overlift device by pumping jack up to full extension under no load and oil in cylinder should return to reservoir via small holes in cylinder, preventing further lift. Repeated operation of this feature under load will damage the seal.

4) TEST LOADS (in tons)

	SWL	105/110% SWL	125% SWL
F805	8	8.4/8.8	10
F1054	10	10.5/11.0	12
F1527	20	21.0/22.0	25
Track Aliner	8	8.4/8.8	10