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WIND, WATER AND STEAM POWER ON DERBYSHIRE LEAD MINES: A LIST

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The following list was compiled by the first two authors, but using also data compiled by the third. It depends heavily of course on lists compiled by earlier writers, notably John Farey (1811), Frank Nixon (1957-8) and Nellie Kirkham (1965-6), but has extended the totals to some 3 wind powered engines, 41 waterwheel, 2 water-balance, 2 water blast and 9 water pressure types, and well over 100 steam engines. It is unlikely to be exhaustive.

The list is restricted to engines installed in lead mines in the main Peak District ore field. It does not include therefore those of the Staffordshire border area, or those of the Leicestershire-Derbyshire mines near Staunton Harold. Nor does it include engines for pumping water from mines for use in non-lead extraction plants, e.g. the engines recovered from Putwell Hill Mine in Monsal Dale or engines used on smelting sites, even where these were used for ore treatment.

Use of the engines was varied, mostly for drainage, but in the 19th century very frequently for winding. Others were designed for, or adapted for, ventilation, crushing and grinding, and in one case each, for sawing and trommelling. Use and type of engine, where known, has been indicated in the list.

We would wish also to acknowledge the considerable help given by individuals; their contributions are shown, like those of the various librarians and archivists, and their respective institutions, in the list, and in the abbreviations and sources below.

Abbreviations

N	= Newcomen type	W	= Winding
C	= Cornish type	P	= Pumping
H	= Horizontal	C	= Crushing or Grinding
B + W	= Boulton & Watt	S	= Sawing

Belvoir: Mss in Belvoir Castle, Leics. By Courtesy of His Grace the Duke of Rutland.
Chatsworth: Mss in Chatsworth House. Either the Devonshire Collection or the Barmaster Collection. By Courtesy of the Chatsworth Settlement Trustees.
BM: British Museum
DRO: Derbyshire Record Office, Matlock.
DCL: Derbyshire County Library, Matlock. (With call reference)
IGS: Institute of Geological Sciences, Leeds.
MJ: Mining Journal, Stoke City Library, Microfilm at DCL.
Op-Mole: c/o Glebe Mine Cottage, Eyam.
Palmer Pearson: Papers in P.D.M.H.S. Collection, DCL.
P.D.M.H.S.: Collection in DCL.
SCL: Sheffield City Libraries (with call reference).
Woolley: Mss in BM, Microfilm in DCL.

Wind Power

L. 18th century	Dimple Mine Matlock	No details	Farey 1811
	North West of Monyash	No details	Farey 1811
No Date	Windmill Near Hucklow	Conjecture based on place name and proximity to High Rake	

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Water Power

Date	Mine	Details	Sources
1633	Tearsall Wensley	An 'Engine' erected by the engineer Bartholomew. Possibly underground and associated with Tearsall Sough or the swallow hole in the mine.	Kirkham 1962 Conjecture
1651	Gang Cromford Moor	Made by engineer Wheatcroft. May have been worked by a horse, but could have been a wheel situated underground in the newly completed Vermuyden's Sough.	Kirkham 1962 Conjecture
1679-80	Nr Youlgreave	An engine erected by engineer Wass failed to drain the mine. The following summer 'Wheeles and Trickles' worked to no avail and at least £300 was lost.	Kerry 1899 p. 41-3
1676-80	Haddonfield	Five waterwheels in a watergate plus an engine worked by six horses. Attemps made previously by engineer named Ward (Wass?) to drain the mine by an 'engine' had failed. The cost of this engine was £500. These operations may have been at Wheels Rake.	Rees, W. 1968, Vol. II p. 654
	Oxclose Haddon		
1700-	Haddonfield	Deep level being worked: cost of drainage paid by Duke of Rutland - £100 in 1702. The last four entries may refer to the same mine.	Belvoir Collection
c1720	Lathkill Dale	Two undershot wheels on Lathkill Dale Vein. No further details.	Rieuwerts 1973
1729	Chapeldale Flagg	A pavment for 'wheel, shrowds, laces, lace arms £9-12-0' without further explanation. No further details.	SCL Oakes Deeds 1151
1743-5	Millclose Wensley	Erected by London Lead Co. and possibly made by Thos. Foster. One wheel was in Wensley Liberty and one sited underground possibly at Millclose Sough Level.	Green 1887 Chatsworth Bundle 139
1746	Millclose Wensley	Two engines, possibly water-wheels made by Thos. Foster of Hexham. Made in 1745? and 1746. See previous entry.	Chatsworth Bundle 139
1746	Stanton Lee	Made by Thos. Foster. Cost about £500. 40' diameter. Worked 4 pumps of 9" diameter. 6' stroke Raised about 1000 gall./min.	Chatsworth Bundle 139 Derby Mercury 1/1/1747

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Mid 18th C	Wragg Sough Matlock Bath	Not proved. The weir shown in a mid 18th C engraving and said by Palmer Pearson to be for a waterwheel used for pumping, appears to be for ore washing purposes.	Palmer Pearson High Peak News 1918
Mid 18th C	Wilcocks Level Matlock Bath	Not confirmed from other sources but supposedly turned by R. Derwent, working rods laid in level. Presumably pumped via an internal shaft to unwater workings below river level.	Palmer Pearson High Peak News 1918
1761	Hagg Mine Matlock Bath	Worked by R. Derwent. Iron rods in level with 10' or 12' pulleys at pump shaft head pumped from 42' to 48'. Still working 1773. Agreement to erect 1761. Described by Geisler 1773.	Woolley 6684 pp. 218-224 Althin 1971, p. 29.
1765	Clear-The-Way or Black Hillock Tideswell Moor	Bought a new tub engine in 1765 for £30. May have been a water balance as at Overton Mine.	SCL, Bag. Coll. 401
1765-6	Crimbo Monyash	Sough and pumped from 60' below sough level. Cost including installation £43-9-0. Designed by William Shewatt.	Robey 1963 Robey 1973
1766	Dimple Matlock	Agreement to cut Goit etc. for wheel dated 1766.	Woolley 6679, f. 1-4. Palmer Pearson, High Peak News 1918
1768	Dick Eye Matlock	Double undershot waterwheel at N.W. side of river. Pumped workings on Seven Rakes on N. side river. Shown derelict by 1780's.	Palmer Pearson, High Peak News 1918 Turner, R.A. & other sketches in BM print department
1769	Raddle Hole Matlock	Drained workings on continuation of Seven Rakes (Slit Race) south of river.	Palmer Pearson, High Peak News, 1918 Flindall, Pers. Comm.
c1770?	Lathkilldale	Shown on plan of 1826 as "site of old engine" with a leat feeding it. May have been a wheel or a very early hydraulic engine erected by the London Lead Co.	Melbourne Est. Office Rieuwerts 1973
1770's	Hillcarr Sough	Two water blasts used for ventilation of sough. a) East side of Moor b) Brown Bank shaft	DRO 504B.L314 Kirkham 1964-5
1771-4	Winster Pitts	A water blast in the mine in 1771 and 1774.	SCL Bag. Coll. 588
1774	Cockwell Ashover	Pumped 25 yards below Cockwell Sough. Pump Dia. 9". Ceased work in 1793.	Section in possession of the Clay Cross CO DRO 1101

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pre 1778?	Ladygate Matlock	Vague reference to an engine possibly at this mine. Signs of holes for flat rod support and walls smoothed by action of rods in vein outcrop at river level.	Bray Tour 1783
1783-91	Cockwell Ashover	Water balance or tub engine at sough level. Pumps 10½' diam. Pumped from 81'.	DRO 1101
c1783	Coalpithole Peak Forest	Two wheels each 24' diameter & with beams 50' long. The mine was paying rent for the use of water possibly for the wheels, by 1783. For sale 8/3/1787. A wind machine, possibly connected to the crank.	Derby Mercury SCL Bag. Coll. 587 (47) Derby Mercury
1790	Hills Rake Bradwell	Small wheel assisted by Curr's engine pumped from 144' below Pictor End Sough.	SCL Oakes Deeds 1500
1800	Cromford Sough	Two wheels by c 1800. A third added before 1815. Pumped about 60' below sough, being	Farey 1811 SCL Bag. Coll. 587 (11)
1815		turned by sough water. The 1815 section shows fly wheels and pendulum pumps - precise details not clear.	Section of Gang Mine 1815 (In private hands)
1815	Blackstone & Tansley Killers Level	Agreement to extend a level driven along Slit Rake to Hard Rake to convey water to power 'A wheel or any other machine for pumping water'.	Bar. Coll.: Chatsworth Matlock Liberty Books of Entry
1818	Black Sough	Goit,wheel etc. installed 1818. Fly wheel installed 1825. Little work done after 1831 & materials gradually disposed.	DRO 504B L362-5 DRO 200B M1 SCL Bag. Coll. 395
1821-35	Wheels Rake	Small wheel 'borrowed from Mr. Alsop'. (see also c1770, Lathkilldale)	DRO 200B M1 DRO 4142 B1
c1825	Ball Eye	'Flywheel' included in mine materials. No other details.	L. Willies Records
1824-44	Side	The wheel was 80 hp and linked to the pumping shaft 120' deep, by flat rods over 300 yards long. The pump lifted 1000 gall./min.	Palmer Pearson High Peak News 1918
1834-6	Lathkill Dale	52' X 9', Pumped 4000 Gall./ min. from 120' by 6 no. 18" dia. pumps. 145 hp.Ironwork made by B. Smith & Co., Duckmanton Ironworks. For sale 1847. Removed by 1862. Also an 18'	Rieuwerts 1973 SCL Bag. Coll. 587 (110
pre 1847		diameter undershot wheel.	

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1836-54	Wheels Rake	18' x 14' broad worked 6" diam. pumps, 25 strokes/min. 5' stroke. Used for pumping and winding. Removed 1854.	Kirkham 1964 DRO 4142 B1 SCL Bag. Coll. 589 (73) 34
1840	Mandale	About 35' diam. pumped from 90' below river level by 2 x 14" diam. pumps. Worked until 1851.	Rieuwerts 1973
1841	Millgreen	Water lease dated 1841 Pumped from 84' feet.	DRO 23 Green 1887
1842	Longstone Edge (Sallet Hole)	Made by Graham & Co., Milton Ironworks. Provided for crushing machine.	Willies 1975, p.54
1844-5	Meerbrook Sough	Small wheel turned by water from Kev of the Country vein, used to work ventilating machine for sough forefield. Cost £100.	R. Flindall Records
1863	Eyam Mines	Waterwheel to power trommel.	Willies 1975, p. 54
1871	Magpie Mine	Ram pump, possibly water operated. Specification by Clay Cross Co. - 15" diam. Not known if installed, but may have been to raise water for washing.	SCL Bag. 218
1874	Magpie (Sough)	Powered compressor for working rock drills in sough. Initially provided ventilation and haulage from sough shaft.	DRO 504B.L408/4
pre 1880	Mawstone	Powered air pump for ventilation. 7' diam.	Stokes 1880-1
No date	Hannage Sough	A waterwheel reputed to exist in a chamber at sough level under Wirksworth said to be in-situ some few years ago.	J.H.R. Records
No date	Owlet Hole - Slinter Wood	Reputed to have been seen by a caving group in the Slinter Wood area.	J.H.R. Records

Water Pressure Engines

1803-5	Crash Purse Alport	Designed by Richard Trevethic: 25 inch cyl. 10 feet stroke, double acting. Balance beam at surface. Worked two 29" pumps. Later moved to Old Engine Shaft, where it worked until c. 1850. Not in 1852 sale as entire engine.	Kirkham 1960-61 Stokes 1880-1, p. 28 DRO 504B.L314
1809-10	Bacon Close Alport	Similar design to above, but installed by Richard Page. 9" cylinder. Later sold to Wheel's Rake, where it was used as a pump barrel.	Willies 1976, I. SCL Bag 587 (73) 2

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1819	Blythe Mine Alport	Similar design. Installed by Page. 25" cylinder with 11½' stroke. Balance bob underground. Sold 1842 to Portaway Proprietors for £100.	Kirkham 1960-1 Willies 1977,a
1830-1	Lathkill Dale Mine	Precessing Disc engine to a design by the Dakeyne Bros. Cast by Benjamin Smith & Co. Duckmanton.	Kirkham 1960-1 Rieuwerts 1973, p. 60-61
1836	Blythe Mine Alport	Made by Fairbairn of Manchester - installed by Page. 36" cylinder, 7' stroke, 9' in pumps. Balance bob underground. Sold 1852.	Kirkham 1960-1
1841	Guy Engine Shaft Alport	Installed probably by Trethewey. Built by Graham & Co. at Milton Ironworks. 7' stroke, 18" cylinder, 9' in pumps. Intended to drain Guy Shaft prior to installation of engine below, but seems to have worked until sold in 1852.	Kirkham 1960-1 Willies 1976, I
1842	Guy Engine Alport	Designed by Darlington & installed by him and perhaps Trethewey. Built by Butterley Co. 50" double acting, direct lift type, with 42" pumps. Model in Science Museum. Sold 1852.	Kirkham 1960-1 Willies 1976, I Stokes 1880-1, pp. 30-31.
1845-6	Pienet Nest Alport	Designed by Darlington, built by Graham & Co. Twin cylinders of 24" diameter, single acting with 10' stroke. Sold 1852.	Kirkham 1960-1 Willies 1976, I
1848	Stanton Mines (Near Alport)	Designed by Darlington. Twin cylinders of 24", but installed with 19" liners fitted. Single acting. Sold 1852.	Kirkham 1960-1 Willies 1976, I
c1842	Wills Founder (Portaway) Winster	The engine from Blythe. Was subsequently altered to single acting, using a Darlington type mechanism to reduce water hammer. Recovered 1976 by P.D.M.H.S.	Willies 1977
1880's	Mawston Mine Youlgreave	Hydraulic engine suggested for draining. Probably not installed, and may refer to the Wills Founder Engine above.	DRO 504B.L314

Steam Power

1717	N	Yate Stoop Winster	P	Only six earlier Newcomen engines are known. Brass cylinder. This engine was situated on Painterway Vein, a branch of Yatestoop Vein.	DRO 504B.L.12 Kirkham 1962 & 1965-6 Rowlands 1968-9 Allen 1969-70

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1720-1721	N	Yatestoop Winster	P	Brass cylinder. Also on Painterway Vein.	DRO 504B,L.12 Nixon 1957-8 Rowlands 1968-9 Allen 1969-70
Poss. 1724 by 1728	N	Yatestoop Winster	P	Probably 24" cylinder. Sent from Coalbrookdale to Mr. Beech at Winster. Old Bess Pumping Shaft, recorded in Barmaster's Books may have been the site of this engine.	Nixon 1957-8 Raistrick 1933, 1938 Allen 1969-70 Bar. Coll. Winster Barmaster's Books, Chatsworth
Poss. 1735	N	Oxclose & Leywood	P	Indirect evidence suggests erection by 1735. Dalefield Mine paying composition for drainage by engine, Sept. 1745. 12/11/1748 fire engine sold for £600.	SCL Spencer Stanhope 60506 SCL Oakes Deeds 1497 SCL Oakes Deeds 1497 Woolley 6680 f.57
1743 1755	N	Cowclose & Leadnams Elton	P	Reference to fire-house 1743. This could refer to the Newcomen Engine House or a ventilation furnace. Definitely installed by 1755.	Bar. Coll. Winstar Barmaster's Book, Chatsworth Nixon 1957-8 Kirkham 1965-6
1743-1744	N	Portaway Winster	P	On Buckdale Shaft. Probably utilised Winster (Portaway Gate) Sough as a pumpway. The engineer Thos. Southern was to work a fire engine at the mine in 1754. Bought pumps for £80 from Watergrove in 1755.	Kirkham 1965-6 Woolley 6679 f. 53-63 SCL Bag. Coll. 486
1748	N	Watergrove Foolow	P	Erected in 1748. Sale notice 29/3/1751 "A good fire-engine - with pumps. Cillinder 34" dia." "Taken out 1756".	SCL Tibbits Coll. 530 Derby Mercury Kirkham 1965-6. Hopkinson 1960, p. 95
1748	N	Millclose Wensley	P	42" cylinder, lifted from 204' including slide rods. Made at Coalbrookdale in 1748. Stopped work in 1763. Sold to Gregory Mine 1768.	Raistrick 1938. Nixon 1957-8 Kirkham 1963
1750	N	Stoneylee Stanton	P	Engine erected 1750. Estimates previously received for both 42" and 36" engines with 14 or 15 fathom lift to Stoneylee Sough	Bar. Coll. Chatsworth Duke of Rutland Liberty Barmaster's Books DRO 1575 Box L
Pre 1757	N	Draket Winster	P	17/1/1757 "The fire-ingin pumps was drawn up at Burning Drake".	Bar. Coll. Chatsworth Winster Barmaster's Books

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1760	N	Placket Winster	P	"Little Engine" sold 1769 for £253 "For several years has been worked by fire engines" (1766) see also 1764 Engine	SCL Bag. Coll. 431 A Woolley 6684 ff 8d-13 Kirkham 1965-6
1761	N	Portaway Winster	P	Agreement with landowners to erect engine 1761 at intersection of Portaway pipe and Coast Rake. Possibly still at work in 1780's and even later.	DRO Rieuwerts Coll. L136 Woolley 6684 ff 26d-30 and ff 140d-145 Hopkinson 1958, p. 14
1762	N	Calver Mill Sough	P	Location shown on Burdett's map 1762. For sale 24/4/1772. Sold in 1774 for £486. Pumps left in. Pumps later sold to Mr. Barnes colliery.	Burdett 1762 Derby Mercury Nixon 1957-8 SCL Bag. Coll. 431A
c1764	N	Placket Winster	P	No details known, but reckonings suggest a cost of about £5000 for installation. New Engine. "Great Engine" sold 1768 for £1460.	Kirkham 1965-6 Chatsworth SCL Bag. Coll. 431A
pre 1766	N	Dalefield Wensley	P	By 1766 was ineffectual and Oxclose Sough was driven forward instead.	Woolley 6679 F 105-7 Nixon 1957-8 Kirkham 1962 II, & 1965-6
1767	N	Yatestoop Winster	P	Shown on plan of 1768 as "New Fire Engine". Installed by Francis Thompson.	Various Nuttall plans Kirkham 1965-6
1768	N	Gregory Ashover	P	The engine purchased from Millclose Mine in 1768. Installed by T. Southern. Pumps left in, 1803.	Nixon 1957-8 DRO 1101
1770's	N	Limekiln & Drake Winster	P	No details: could refer to the 1757 engine, but loss of £6000 made at the mine at this time.	Kirkham 1965-6 Woolley 6678 F 202-11 and f 218-9
1777	N	Yatestoop Winster	P	Installed by Francis Thompson. Cylinder 70" diam., 8' stroke. Sale Notice 4/4/1782. To be sold "At a low price" (possibly the 1767 engine above)	Kirkham 1965-6 Derby Mercury
1770's	N	Oxclose Snitterton	P	Borrowed parts of a fire engine from Dalefield Mine (see above). Sold in 1785 for £290 to a Mr. Sutton.	Nixon 1957-8 Kirkham 1962, II Kirkham 1965-6 SCL Bag. Coll. 431 A
pre 1778	N	Millclose Sough Wensley	P	No details known. Offered for sale in 1778. May have been near head of sough in Clough Wood.	Nixon 1957-8 Information from Mr. L. Vickers of Oaker.

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1781	B & W	Gregory Ashover	P	Boulton & Watt. 45" cylinder. separate condenser. 7' stroke. lifted 198'. Stopped working in 1803. Balance bobs in shaft. Very probably sold about 1803 to Mr. Woolley, Westedge Mine.	Nixon 1957-8 Section in possession of Clay Cross Co. Band, Pers. Comm.
1782	N	Yatestoop Winster	P	Installed underground by Francis Thompson. Cylinder 64½". Boiler 21' diameter. Pumped from 90' below Yatestoop.	Nixon 1957-8
pre 1783	N	Coalpit-hole Peak Forest	P	For sale 29/5/1783. Cylinder 26" diam. 18 yards of pumps 15½" diam. "Erected butlately and very little worked".	Derby Mercury
1793		Westedge		Decision to erect mining engine. The materials for its construction could be "obtained locally". Completed June 1793.	Band, 1976, p. 132 Band, Pers. Comm.
1794-1795	N	Watergrove Foolow	P	Dec. 1794-Nov. 1795 paid Booth & Co. Sheffield £673-8-4. Both engine and engine house offered for sale in 1853. 16 hp and lifted 177 ft³ water/min. 16" diam. pumps, 32 yards long and 15" diam. pumps, 32 yards long. 19/5/1847 Old Engine House to be pulled down. Sale Notice 16/8/1836. 38" diam. cylinder, 7' stroke.	SCL Bag. Coll. 422 Sale catalogue SCL Bag. Coll. 518 Sheffield Mercury
1795	N	Gregory Ashover	W	Installed by Francis Thompson. Late Newcomen type. Double acting, wound from 798' on forefield shaft. Cost £300. Finished working in 1803. For sale 5/6/1806. Sold in 1806 to "Mr. Wolley".	Nixon 1957-8 Section in possession of Clay Cross Co. Derby Mercury DRO 1101
1795	N	Hills Rake Bradwell	P	Erected 1795. Made by John Curr, Sheffield, cost £314-11-10 with accessories. cylinder 18". Sold 1801 to Wm. Smallwood & Co.	SCL Oakes Deeds 1500
by 1802	N	Seven Rakes Matlock	P	Position of fire engine shaft known from Barmaster's entries. First recorded 19/4/1802. Probably still working in 1815, but ceased by 1816. Pumps sold to Seven Rakes by Gregory Mine in 1802 for £8.	Bar. Coll. Chatsworth, Matlock Liberty Books of entry. Liberty 25" maps. DRO 1101
1803	N	Westedge Ashover	P	Cylinder diam. 45", with air pump & condenser. Oak beam 24' long, Boiler 14' diam. The Boulton & Watt Engine from Gregory Mine for £498. For sale 20/4/1809 and 16/5/1811. Sold by Dec. 1811 to Fletcher & Co & Brocksopp & Co. for £508.	Derby Mercury SCL Bag. Coll. 587(40)

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pre 1807		Goodluck Wirksworth	P	Position of engine house shown on plan 8/5/1807 "On Goodluck Vein the London Co. spent much money on a steam engine in trying to raise the water".	SCL Bag. Coll. 587(40)
c1806	N	Stoneyway or Mullet Hill Matlock	P	Sale Notice "A steam engine lately erected - dia of cylinder 36"; boiler which is nearly new 12' dia. 22/1/1807	Derby Mercury
c1809	N	Dimple Matlock	P	80 hp, 51" diam. cylinder, stroke 7'6". 150 yards of 13" and 8" pumps. Sale notice 31/12/1812 & 18/2/1813 "Only engine working in 1809".	Derby Mercury Farey, J. 1811
1810	N	Dimple Matlock	W	18-20 hp, 4' stroke, rotative motion. For sale 31/12/1812 and 18/2/1813.	Derby Mercury
1810?	N	Ladygate Matlock	P	"Only engine working in 1810". As the Dimple possessions included part of Ladygate Vein by 1809. These engines referred to by Farey are possibly one & the same.	Farey, J. 1811 J.H. Rieuwerts, pers. conjecture based on Bar. Coll. Chatsworth Books of Entry, Matlock Liberty
1818	N	Cromford Moor	W	1818 "The whimsey that draws up the lead ore". Remains of chimney at Black Rocks may belong to this engine. Sketch c1825	Mawe 1818 Rieuwerts 1972 Mawe 1825 (DRO)
by 1820	N	Moot Hall Matlock	W	Probable pumping shaft and engine meer at SK 290607 Granby Level probably acted as a pumpway. Working in 1820.	L. Willies, Pers. conjecture. Kirkham 1965-6 Bar. Coll. Chatsworth Book of Entries, Matlock Liberty
1825	N	Magpie Sheldon	P	The last atmospheric pumping engine on a Derbyshire lead mine. 42" diam. cylinder, 9' stroke, made by Jos. Thompson, Chesterfield.	Kirkham 1965-6 Bag. Coll. 587 (20)
1837-1838	C	Water-groove	P	70" cylinder, 10' stroke. Side lever engine by Wm Fairbairn, Manchester, 6 boilers. Sold in 1853 to Cawdor Mine, Matlock.	Hayward 1973 Kirkham 1965-6
1840	C	Magpie	P	Bought from South Wheal Towan (Cornwall) at cost of £500. 40" cylinder, 9' x 7' stroke, iron bob. For sale 3/11/1846, wooden balance bob. Sold to Mr. Williams (prob. New York Mine, Staffs.)	SCL Bag. 587 (20) Kirkham 1960 Derby Reporter Porter & Robey, 1972

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1840	C	Magpie	W	20" cylinder, 4' stroke, double-acting vertical since it had spring beams, Sold to High Rake.	Kirkham 1965-6 Rieuwerts, 1974
by 1842	C	Wakebridge	W P C	No details	Children's Employment Commission 1842 Willies 1975
1842	C	Hubbadale	P	Purchased new, 40" cylinder, 10' x 9' stroke. For Sale 13/11/1844. Sold c. 1844	Kirkham 1964 & 1966 Willies 1976 Derby Reporter
1843		Bullestree Matlock Bath		Pumps, buckets, pipes supplied by Butterley Co. Sale of 1/24 share in mine & steam engine.	DRO D503 Furnace Ledger, p. 554 Bar. Coll. Book of Entries, Matlock Liberty
1844	H	Meerbrook Sough	W	Made by Thornewill & Co., Burton-on-Trent. Cost £170. Cylinder 12½" diam., 10 hp, high pressure oscillating engine, 2½' stroke, 5' diam. rope drum. Sold in 1870 for £442.	R.B. Flindall, pers. comm.
1842	C	High Rake	P	Made by Graham & Co, Milton Ironworks. 36"/70" Sims compound, 10' stroke. Engine valued at £2,705 in 1850. Sold to Mixon Mines 1853.	SCL Bag. Coll. 519 & 520 Derby Liberty, Wyatt Letters Rieuwerts, 1964 Kirkham, 1965-6
1847	C	High Rake	W & C	From Magpie, 20" cylinder, 4' stroke. "Appendages for crushing added by Trethewey". Sold to Mixon Mines in 1853.	SCL Bag. Coll. 519 & 520 Rieuwerts, 1964 Kirkham, 1965-6
1847	W	Watergrove	W & C	Installed by Tretheway. "with appendages for crushing".	SCL Bag. Coll. 518 Willies 1975
1848	C	Mandale	P	Made by Graham & Co., Milton Ironworks. 65" cylinder, 9' x 8'6½" stroke. 150 hp. Sale notice January 1852.	Rieuwerts, 1973
1848		Bullestree Matlock Bath		40 hp. - "in course of erection" 2/2/1848. Spare power for drawing and stamping.	Derby Mercury
1848	C?	Wakebridge Crich	P & C	50 hp. No further details but possibly the pre 1842 engine above.	Kirkham 1965-6
pre 1853		Cawdor Matlock		Destroyed by an explosion in Sept. 1853. No details of engine. Replaced by the Watergrove Side Lever Engine.	R.B. Flindall, pers. comm.

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c1852-1853	H	Brightside Hassop	W & P & C	Made by Bray & Co, Leeds. 22" diam. cylinder, 25 hp High Pressure Sold to Coalpithole.	Rieuwerts, 1972 Kirkham 1965-6 Fletcher & Willies, 1975
c1852-1853	H	Wren Park Calver	W & P	22" diam. cylinder. 35 hp. High pressure, 2 boilers.	MJ 29/8/1863 MJ 6/6/1863
Pre 1853 & 1853		Yatestoop/ Plackett Winster	W	Whim engine sold by Yatestoop to Plackett for £263-18-2.	SCL Bag. 538
1853	C	Cawdor Matlock	P	Purchased 70" engine from Watergrove. 200 hp. 10' x 9' stroke. For Sale 22/11/1861 Supposedly removed in 1864.	R.B. Flindall (pers. comm.) Derby Reporter IGS
pre 1861		Cawdor	W&C	Made by Graham & Co., Milton Ironworks, Elsecar. 20 hp. Egg boiler 30' x 3' diam. For Sale 22/11/1861 Supposedly removed in 1864.	 Derby Reporter IGS
1853		New Midland Ashover	P	12½" diam. cylinder, vertical high pressure engine, 2'6" stroke. For sale 28/3/1862.	 Derby Reporter
1853		New Midland Ashover	W	12" diam. cylinder, 3' stroke, horizontal high pressure, 5' diam. winding drum. For Sale 28/3/1862.	 Derby Reporter
1856-1862		Fall Hill Milltown Mining Co. Ashover	W & P & C	40 hp condensing engine. Two large boilers. For Sale 22/8/1862 The plant was purchased by the New Milltown Mining Co. for about £500.	Band 1976, p. 132 Derby Reporter MJ 6/9/1862
c1857		Dusty Pit Eyam	P C S W	Proposals to erect small drawing engine, 1843. 10 hp. Shaft 312' deep.	P.D.M.H.S. D12 (DCL) Kirkham 1965-6
1855		Hilltop/ Beech Grove	W	14 hp. Fly wheel and boiler supplied to Beech Grove 30/3/1855.	MJ 22/10/1859 BSA Coll. DRO
1862-1863		Great Hucklow	P	Pumping from 75-80 fathoms. Boiler by Ormerod & Co., Manchester for £176-13-0. Lower list of pumps, 12" diam.	BSA Coll. DRO
1857	H	Chapel Dale Monyash	P	16" diam. cylinder, 3' stroke, made Musgrave, Son & Heaton, Bolton. 8 hp. Remains of transmission underground. For Sale 1861.	Robey 1961 Robey 1973

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1858	H	Chapel Dale Monyash	W	As 1857. Could be used separately or coupled.	Robey 1973
	C	Old End Crich	P	Made by Perran Foundry, Cornwall. 48" diam. cylinder, 8'6" x 9' stroke, 2 boilers. For Sale 1864.	Kirkham 1965-6
				For Sale 11/11/1886. 90 hp., Cornish engine with 3 boilers.	DRO 161B/ES278
1858	C	Calver Sough	P	Made by Bowling Ironworks, Bradford. 70" diam. cylinder, 12' stroke, 200 hp., 3 boilers. For Sale 1863. Sold to Magpie in 1869.	Rieuwerts 1972 MJ 6/6/1863 MJ 29/8/1863
1858	C	Wakebridge Crich	P	Made by Thornewill & Wareham, Burton-on-Trent. 60" cylinder. Sold to Millclose 1889.	Kirkham 1965-6
1859-1860	C	Millclose	P	Made by Thornewill & Wareham, Burton-on-Trent. Initially sited at Watts Shaft. Moved to new shaft about 1896. 80-120 hp., 50" cylinder with three boilers.	DRO 161B/ES278 Kirkham 1965-6 Rieuwerts 1972
1859-1860		Millclose	W	Single turn drum in photograph of Watts Shaft	Rieuwerts 1972
1859		Milldam Hucklow	C & W & P	Made by Davy Bros., Sheffield. 12 hp., cost £330. Mine abandoned c. 1880.	Kirkham 1963 MJ 1/1/1859
1859	C	Pearsons Venture Crich	P	Made by Thornewill & Wareham, Burton-on-Trent. No further details.	Kirkham 1965-6
1859	H	Stoneyway Matlock	P	Made by Davy Bros., Sheffield. 12 hp., pumps and gearing. Setting out room for engine house July 1857.	Bar. Coll. Book of Entries, Matlock Liberty.
				Nearly new when offered for sale 25/11/1859	Derby Reporter
1861		Coalpit-hole Peak Forest	W P	Made by Davy Bros., Sheffield. Portable engine. Cost £150. Nicknamed "The Johns". Originally used for winding, but from 1864 also for pumping, until the 1865 Mitchell engine was operational.	Crabtree 1967
1862-1863	C	Milldam Hucklow	P	No details, but took over pumping from 1859 engine.	MJ 31/1/1863
1863		New Engine Eyam		Made - Davy Bros., Sheffield.	Ford & Rieuwerts 1975 Kirkham 1965-6
Post 1863		Ladywash Shaw Engine Stoke Engine Magclough		Sale 1884. Pumping engine, 2 horizontal engines & 2 drawing engines. Includes engine above (1863).	SCL Bag. Coll. 587 (10)

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1865	H	Coalpit-hole Peak Forest	P & W	Made by Mitchell & Sons, Barnsley. Cost £390. The first boiler made by Messrs. Wood for £164. Second boiler added later. Shaft 420' deep.	Rieuwerts 1972
1870		Milldam Hucklow		Tenders invited for erection of boiler and engine house for Cornish pumping engine 20/1/1870.	DRO BSA Coll.
pre 1868	C	Moletrap Matlock Bath	P	Possibly made by Butterley Co. 60 hp., 3 valve, two tubular boilers 26' x 5' diam. Said to be nearly new. For Sale 22/5/1868	Derby Reporter
1869	C	Magpie	P	Bought from Calver Sough. 70" diam. cylinder, 11'6" stroke, 4-6 strokes/min. Used 80 tons of coal/week. Sold to Manvers Colliery, Stantongate, 1883.	Brown & Ford 1971 Rieuwerts 1972
1869		Magpie	W	25 hp. single cylinder, horizontal, made by Oliver & Co. Scrapped 1953.	Brown & Ford 1971
1870	H	Pindale	P & W	Made by Walker & Eaton, Sheffield.	Ford & Rieuwerts 1975 DRO BSA Collection
1870		Coalpit-hole Peak Forest	P & W	1852 Bray Engine purchased from Brightside for £188. Flat rope for winding. Boiler 30' x 6'.	Rieuwerts 1972 Crabtree 1967
1872		Tissington	P W ?	Large shaft sinking, "operations carried on by means of a steam engine" 16/15/1872.	Derby Mercury
pre 1874		Hilltop Hucklow		Engine and boiler house pulled down 1873-4	High Peak News 5/7/1879
1875	C	Millclose	P	Made by Harvey & Co., Hayle. 80" cylinder, the largest Cornish engine erected in Derbyshire. 10' x 9' stroke, 250-300 hp. Four Galloway boilers Scrapped in 1933	Ford & Rieuwerts 1975 Kirkham 1965-6 DRO 161B/ES278
1875		Millclose	W	Double turn drum in photograph of Lees Shaft. Made by Thornewill & Wareham, Burton-on-Trent. Worked at the mine until 1939.	Rieuwerts 1972 DRO 161B/ES278
by 1876	H	Bage Wirksworth	W P C	24" diam. single cylinder. 4' stroke. 16 hp., 6½' diam. drum, winding from 354' deep shaft. For Sale 1886 - but listed as 12 hp.	Lecornu 1879 DRO 161/ES278

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c1880	H	Black Engine Eyam		Shaft to be fitted with conductors and cage and water box counter-balancing.	SCL Bag. Coll. 3432
c1880		Co-op Bradwell	W	Portable engine. Shaft fitted with conductors and cage. Tank fitted beneath cage for winding water. Shaft 240' deep.	Rieuwerts 1977 SCL Bag. Coll. 3432
pre 1881		Mawstone	W P	No details	High Peak News 5/11/ 1881
1881		Longrake	W C	No details. Could be present winder.	High Peak News 29/10/ 1881
one engine at least by 1880		Wheels Rake Haddon	W	Vertical engine with fly wheel. For Sale 6/7/1894 14 hp. portable engine by Fowler, Leeds. One shaft had a cage and wooden conductors. A large boiler was sold to South Normanton Colliery in the 1890's.	DRO Rieuwerts Coll. L 126-7 Derbyshire Advertiser Derbyshire Advertiser High Peak News 27/5/ 1883 Kirkham 1964
pre 1883		Silence Tideswell	P	No details. Possibly one of the Milldam Engines, since owned by Milldam.	High Peak News 27/1/ 1883
pre 1886		Old End Crich	W C	20 hp., for sale 1886.	DRO 161B/ES278
pre 1886		Wraithe Elton	W C	Made by Thornewill & Wareham. 14" diam. cylinder, 20 hp. For Sale 1886.	DRO 161B/ES278
Late 19th C.		Wakebridge Crich	P	Engine underground at level of Ridgeway Sough. Coal for engine boated up sough.	Kirkham 1965-6
pre 1886		Wakebridge Crich	W	Small drawing engine. Probably still at the mine in the 1890's. For Sale 1886.	DRO 161B/ES278 Kirkham 1965-6
pre 1886 poss. 1860's		Rantor Wirksworth	W C	Although listed under Meerbrook Sough probably used by Mr. Wass on the Rantor branch level. 14 hp. For sale 1886.	DRO 161B/ES278 Rieuwerts, pers. conj.
1886	P	Millclose	W	Portable engine with winding drum.	DRO 161B/ES278
1887	H	Greensward Monyash	P W ?	Being erected in 1887. Described by an old miner as a "Stand Ingin" i.e. a horizontal engine. Plunger pump still in situ at 360' depth.	Green et al., 1887 C.H. Millington - pers comm. Op-Mole Records
1889	C	Millclose	P	Cornish engine from Wakebridge nicknamed "Alice".	Kirkham 1965-6
c1891		Mawstone Youlgreave	W	No details.	Kirkham 1965-6.

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No	Hogsland	12" diam. cylinder.	Kirkham 1965-6
Date	Ashover		Band 1976, p. 133.

POSSIBLE ENGINES, DETAILS OF WHICH ARE TOO SLIGHT TO BE LISTED ABOVE:

Bradwell Mine: possibly Wortley or Rake Head, c. 1886	SCL Bag. 3432
Black Engine, Eyam: shaft fitted with conductors and cage c. 1886	SCL Bag. 3432
Blobber, Wirksworth: photo c. 1920's shows small engine house.	Pers. comm. R. Gould
Blakeden, Stoney Middleton: No details.	Kirkham 1965-6
Cromford Moor: probably steam engine c. 1925 on concrete base.	
Ashtree Run - Hallwood Pipe, Snitterton: entries in Barmaster books refer to 'old fire engine shaft' in 1808, 1824. Not the Dalefield in the list above.	Chatsworth
Golconda, Brassington: No details.	
Glory, Taddington: late 19th century	Green 1887, Chatsworth
Great Rake, Brassington: engine beds remain	
High Rake, Monyash: late 19th or early 20th century. cage and conductors.	C.H. Millington, pers. comm.
Nickalum Mine, Brassington: remains of Cornish Engine House.	L.H. Butcher, photograph
Middleton Mine, Youlgreave: no details.	
Magpie Mine, Sheldon: Pulsometer pumps, c. 1915.	Brown & Ford 1971, p. 10.
Orchard, Winster: portable engine suggested in 1860.	DRO 1456.L26
Oxclose, Matlock: mid 19th century.	Kirkham 1965-6
Slack Mine, Tearsall, Bonsall: concrete engine beds visible.	
Watergrove, Eyam: c. 1890.	Kirkham 1965-6
Victoria or Townhead, Ashover: 1856, no details.	

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