



## 

V460 18" Swing Vari-speed Lathe V550 21" Swing Vari-speed Lathe





# ORIGINAL INSTRUCTIONS AND SPARE PARTS MANUAL

**MACHINE MANUAL PART # 2 OF 2** 

## V460 18" Swing & V550 21" Swing Harrison Vari-speed Center Lathes

#### The Ultimate Turning Machines

The V460's and V550's feature packed design offers the advantage of infinitely variable spindle speeds whilst maintaining equal capabilities for high rates of metal removal or fine precision finishing. On production, maintenance work or in the toolroom the V460 or V550 represents an outstanding investment with operators immediately responding to its easy positive and comfortable controls.

#### **Features**

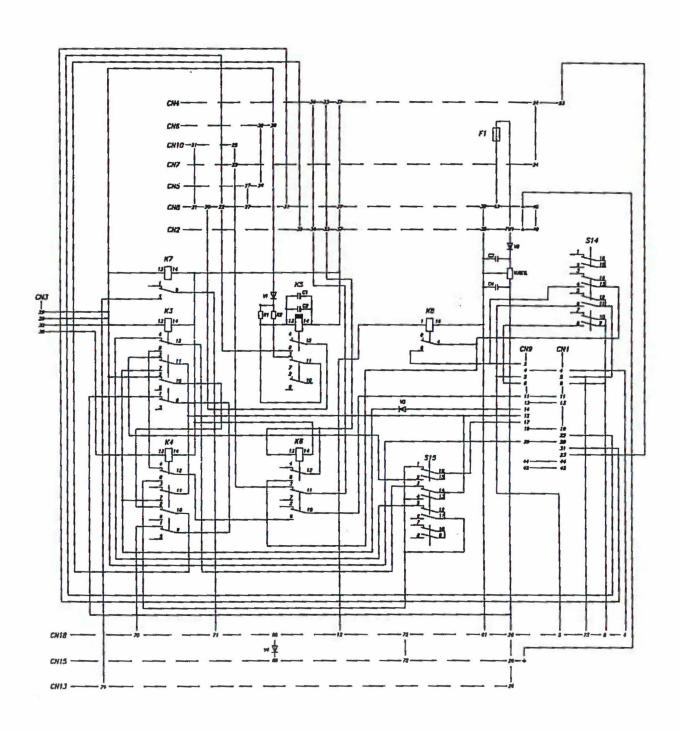
All Harrison V Machines Feature:

- Cast iron triangular webbed bed for optimum rigidity and swarf clearance
- Infinitely variable spindle speeds with digital display
- Camlock spindle nose for fast chuck changeover
- Leadscrew reversing box
- Standard constant surface speed (CSS) cutting with DRO Comprehensive range of imperial and metric screw thread cutting

#### **Specifications**

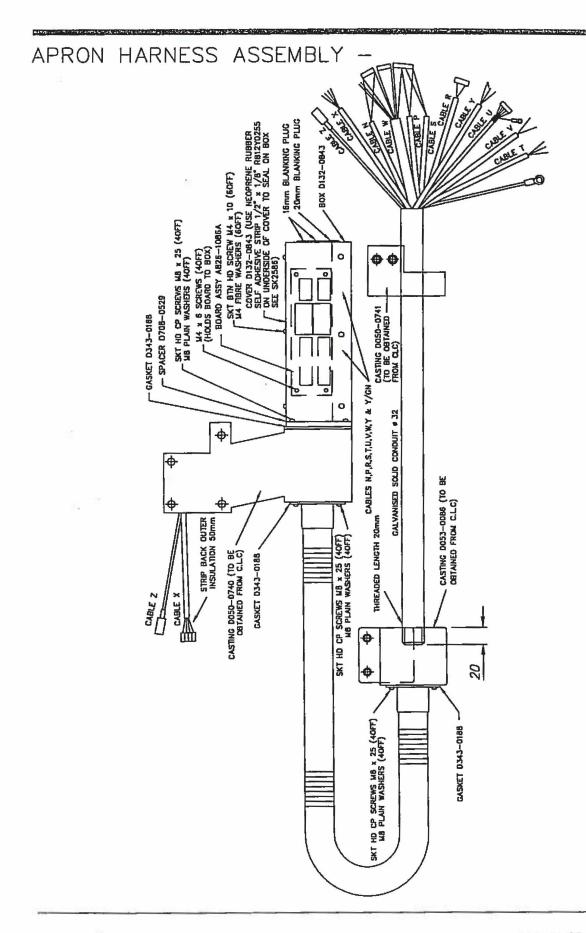
- 8		V460	V550
Centers	Height	230mm (9")	280mm (11")
	Admit Between		2000/3000mm (80/120")
Swing	Over Bed		554mm (21-7/8")
	Over Cross Slide	270mm (10-5/8")	370mm (14-1/2")
	In Gap Diameter	730mm (28-3/4")	830mm (32-3/4")
10	Length	216mm (8-1/2")	216mm (8-1/2")
Spindle	Bore	76mm (3")	90mm (4.1")
	Nose	D1-8 Camlock	D1-11 Camlock
	Morse Taper in Nose	5 MT	5 MT
Speeds	Number	3 infinitely variable	3 infinitely variable
Name of Street	Range	20 to 2000rpm	18 to 1800rpm
Motor	- CONTRACTOR	11kW	11kW
Leadscrew	Diameter	38mm (1-1/2")	38mm (1-1/2")
	Thread		6mm pitch or 4 TPI
Threads	Metric Pitches	78 from 0.2 to 14mm	78 from 0.2 to 14mm
3	Imperial Pitches	79 from 2 to 84 TPI	79 from 2 to 84 TPI
	Module Pitches	47 from 0.2 to 3.5 MOD	47 from 0.2 to 3.5 MOD
	Diametral Pitches	47 from 8 to 72 DP	47 from 8 to 72 DP
Feeds	Metric	38 from .04 to .84mm/rev	38 from .04 to .84mm/rev
-00-00-00-00-00-00-00-00-00-00-00-00-00	Imperial	38 from .0016 to .110in/rev	38 from .0016 to .110in/rev
Cross Slide	Width	203mm (8")	203mm (8")
- 3	Travel	300mm (11-7/8")	300mm (11-7/8")
Top Slide	Width	133mm (5-1/4")	133mm (5-1/4")
	Travel	150mm (6")	175mm (6-7/8")
Tailstock	Quill Diameter		95mm (3-1/4")
	Travel	145mm (5-11/16")	178mm (7°)
	Morse Taper	6 MT	6 MT
Weight		2615kg (5753lbs)	2850/3610kg (6270/7942lbs)
Dimensions	LxWxH	3.25x1.70x2.05m (128x67x81")	3.75x1.70x2.10m (147x67x81") 4.75x1.70x2.10m (187x67x81")

#### RELAY BOARD SCHEMATIC DIAGRAM



Page 19-1x MAS/MSF 12/93 EP767

	AND (PANTS LIST)	EP 767
Item No.	Description	Part No.
	FUSE CARTRIDGE 20x5mm 500mA	:
	FUSE HOLDER 20x5mm (FU1)	
	RESISTOR Ik.250mW. 10% (R1)	
1	231-132 WAGO SOCKET 2-POLE (CN5/6/7/10/13)	
	231-134 WAGO SOCKET 4-POLE (CN3/15)	
	231-138 WAGO SOCKET 8-POLE (CN2/4)	
	231-140 WAGO SOCKET 10-POLE (CN8)	
	231-142 WAGO SOCKET 12-POLE (CN1/18)	
	231-144 WAGO SOCKET 14-POLE (CN9)	
	MY4-02 SERIES OMRON RELAY 4-POLE C/O 11 0V (K3,4,6)	
	RP410615 SCHRACK RELAY 1-POLE C/O 110V (K7)	
	MY4-02 SERIES OMRON RELAY 4-POLE C/O 24VDC (K5)	
	'RS' RELAY 2-POLE C/O 24VDC STOCK No. 351-847 (K8)	
	RESISTOR 120R. 250mW. 10% (R2)	
ļ	DIODE 1N4004 (V1/2/3)	
İ	CAPACITOR. ELECTROLYTIC (CI) 220μF.40V	
	CAPACITOR. ELECTROLYTIC (C2) 330µF.40V	
	CAPACITOR 470µF 63V (C3)	
	CAPACITOR 100nF (C4)	
	DIODE. 1N4148(V4)	1
-	VOLTAGE REGULATOR 24VDC.(V.REG)	
	4-POLE 2-WAY SLIDE SWITCH(\$14/15) (DIL. PACKAGE)	
CN1	OPERATOR'S PANEL	
CN2	OPERATOR'S PANEL	
CN3	THIRD SHAFT SWITCH	
CN4	AUXILIARY OPERATOR'S PANEL	
CN5	END GUARD	1
CN6	CHUCKGUARD	
CN7 CN8	KICKSTOP  MAGNETIC'S PANEL	
CN9	SPINDLE DRIVE UNIT	
CN10	BRAKE OVERLOAD UNIT	
	5, 1, 11, 2, 0, 12, 12, 0, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13	
CN13	IN GEAR POSITION	
CN15	SPEED DISPLAY Y/POT.SWITCH	
CN18	DRO/CSS UNIT	



CABLE T	3 CORE 0.5mm <sup>2</sup> CABLE	
WIRE No.	CORE COLOUR	P.C.B.
91 92	BLUE BROWN YELLOW/GREEN	91 92 <del>‡</del>

CABLE U 12-CORE 16/0.2mm SCREENED			ΞD
CN18 12-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
1	70 (R.H.S)	WHITE	70
2	71	MAUVE	71
3	60	TURQUOISE	60
4	12	PINK	12
5	72	BLACK	72
6	61	GREY	61
7	26	ORANGE	26
8	5	YELLOW	5
9	73	GREEN	73
10	6	RED	6
11	4	BLUE	4
SN	NC (LHS)	SCREEN	SN

ÇABLE V	3 CORE 0.5mm <sup>2</sup> CABLE	
WIRE No.	CORE COLOUR	P.C.B.
81 82 SPARE	BLUE BROWN YELLOW/GREEN	81 82 SPARE

C	CABLE W 12-CORE 16/0.2mm NON-SCREENED		
CN1 12-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
7 8 9 10 SPARE	22 29 31 (LHS) 23 SPARE	RED BLUE YELLOW TURQUOISE ORANGE	22 29 31 23 SPARE

CABLE W 12-C	12-CORE 16/0.2mm NON-SCREENED	
WIRE No.	CORE COLOUR	P.C.B.
32 (RHS)	WHITE	32
33	BLACK	33
37	VIOLET	37
40	PINK	40
SPARE	GREY	SPARE
	WIRE No.  32 (RHS) 33 37 40	WIRE No. CORE COLOUR  32 (RHS) WHITE 33 BLACK 37 VIOLET 40 PINK

	CABLE W 1	2-CORE 16/0.2mm NON-SCREE	NED
CN3 4-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
1	36	BROWN	36
3	30	GREEN	30

	CABLE S 4-CORE 7/0.2mm SCREENED		
CN1 12-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
4 5 6 SPARE 12	11 13 19 SPARE 45	BLACK RED WHITE GREEN SCREEN	11 13 19 SPARE 45

CABLE P 4 - CORE 7/0.2mm SCREENED			
CN1 12-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
1	4 (RHS)	BLACK	4
2	5	WHITE	5
3	6	RED	6
SPARE	SPARE	GREEN	SPARE
11	44	SCREEN	44

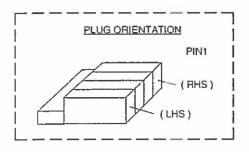
CABLE N 2 - CORE 7/0.2mm SCREENED			
CN2 8-WAY PLUG	WIRE No.	CORE COLOUR	
5	38	BLACK	38
6	Ę1	RED	F1
7	<u> </u>	SCREEN	=

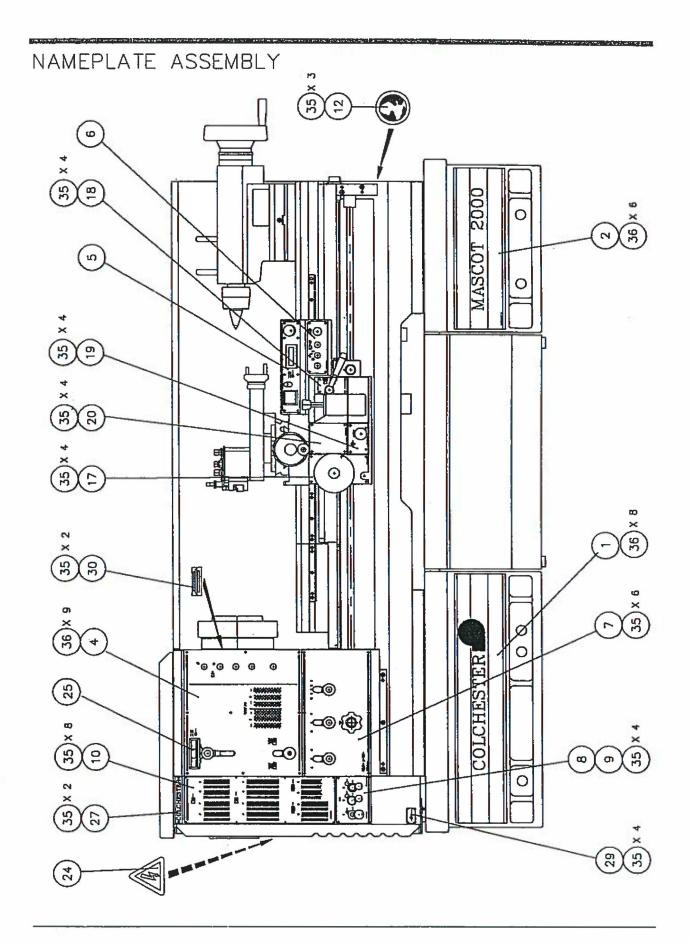
CABLE R 2 - CORE 7/0.2mm SCREENED			
CN15 4-WAY PLUG	WIRE No.	CORE COLOUR	P.C.B.
2	72	BLACK	72
3	26	RED	26
4	÷	SCREEN	÷

(	CABLE X 4 - CORE 1.0mm <sup>2</sup> CABLE				
WIRE No.	WIRE No. CORE COLOUR CONNECTOR COLOUR				
U5 V5 W5	BLUE BROWN BLACK YELLOW/GREEN	U5 V5 W5	BLACK BLACK BLACK GREEN		

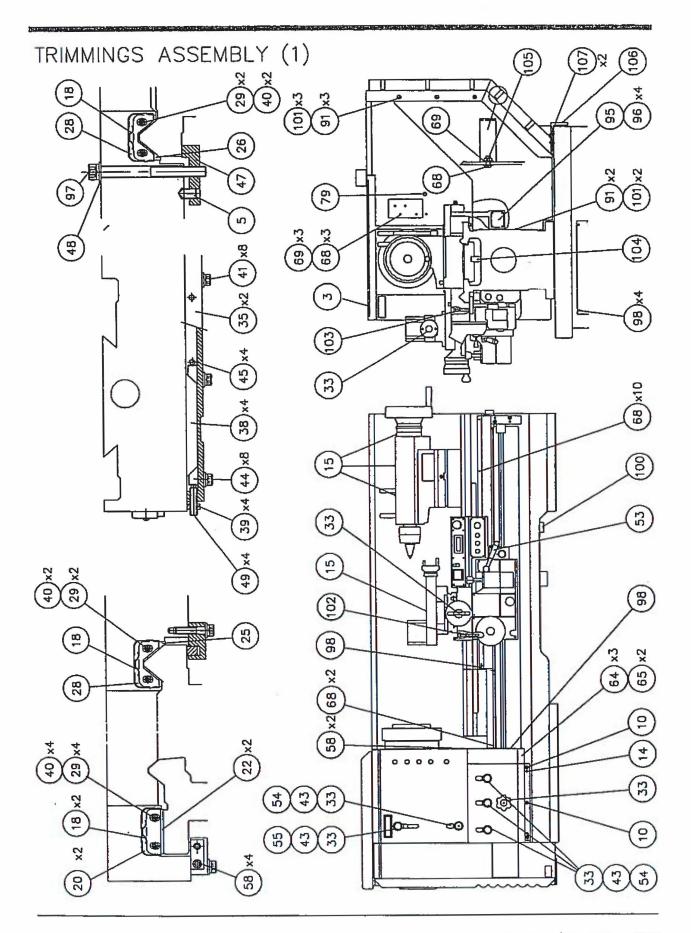
CABLE Y 3 - CORE 0.5mm <sup>2</sup> CABLE		
WIRE No.	CORE COLOUR	P.C.B.
21 37 <del>-</del>	BROWN BLUE YELLOW/GREEN	21 37 <del>-</del>

CABLE Z 4 - CORE 7/0.2mm SCREENED CABLE			
PLUG PIN No.	CORE COLOUR	REF ONLY	PLUG PIN No.
1	RED	46	1
2	2 BLACK 47		2
3	3 GREEN 48		3
4 WHITE 49		4	
	l 		
NOTE: SCR	FEN TO BE CO	ONNECTED TO	DIN CONNECTORS

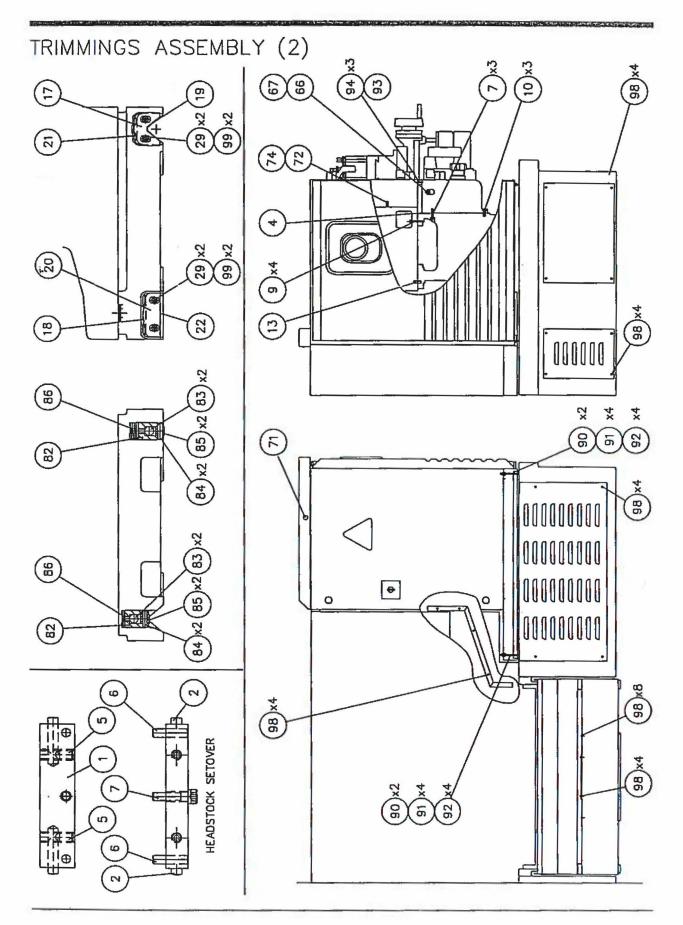




Item No.	Description	Part No.
item No.	Description	ran No.
1 2	'COLCHESTER' PLATE 'MASCOT 2000'	D537 - 1095 D537 - 1096
4 5 6 7 8 9	HEADSTOCK PUSH BUTTON AND REVERSE BOX PLATE UPPER APRON CONTROL PLATE LOWER APRON CONTROL PLATE GEARBOX PLATE METRIC CHANGE WHEEL PLATE IMPERIAL CHANGE WHEEL PLATE THREAD AND FEED PLATE	D537 - 1098 D537 - 1099 D537 - 1100 D537 - 1101 D537 - 1102 D537 - 1103 D537 - 1104
12	'WORLD TURNS ' PLATE	D537 - 0783
17 18 19 20	APRON PLATE APRON.HALF NUTPLATE APRON KNOCK-OFF APRON BLANK PLATE	D537 - 1108 D537 - 1111 D537 - 1112 D537 - 1113
24 25	ELECTRICAL WARNING FLASH SPEED RANGE PLATE	D565Y0406 D537 - 1109
27 28 29 30	SMALL 'COLCHESTER' PLATE RED ARROW LABEL '600 GROUP' LOGO PLATE CHUCK WARNING PLATE	D537 - 1057 D537 - 1039 D537 - 1071 D537 - 1082
35 36	TAPTITE SCREW M3x5 HEXAGON SOCKET BUTTON HEAD SCREW M6x10	B123 - 6065 B163 - 1813



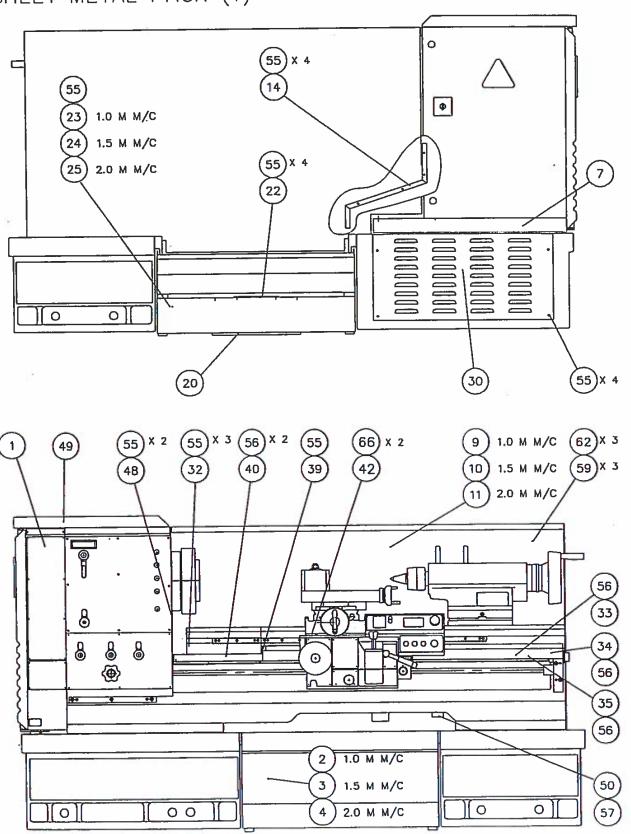
Item No.	Description	Part No.
1 2 3 4 5 6 7 9 10 13 14 15 17 18	SETOVER PAD SET OVER PIN HEADSTOCK MAT GEARBOX GASKET WEDGELOK SET SCREW M12x20 SPIROL PIN 10x40 HEXAGON SOCKET CAP HEAD SCREW M10x40 HEXAGON SOCKET CAP HEAD SCREW M10x50 HEXAGON SOCKET CAP HEAD SCREW M10x25  DOWEL PIN 12x36 DOWEL PIN 10x30 CONCAVE LUBRICATOR 6mm DIA.  TAILSTOCK VEE SHIELD LEAF SPRING TAILSTOCK BED VEE WIPER	D557 - 0154 D560 - 0297 D132 - 0813 D403H003 B164 - 0170 B111 - 5160 B163 - 0071 B163 - 0068 B111Y7093 B111 - 7057 B454 - 2004 D725 - 0027 D707 - 0051
20 21 22	SADDLE/TAILSTOCK FLAT WIPER SHIELD SPRING SADDLE/TAILSTOCK BED FLAT WIPER	D937 - 0018 D725 - 0013 D937 - 0068 D937 - 0010
25 26	SADDLE BED VEE WIPER (LH) SADDLE BED VEE WIPER (RH)	D937 - 0011 D937 - 0012
28 29	SADDLE VEE WIPER SHIELD WIPER SPACER	D725 - 0014 D708 - 0087
33 35	SADDLE STRIP MOUNT	B224 - 2143
38 39 40 41 43 44 45	SADDLE STRIP MOUNT  SADDLE STRIP LOCKING PLATE HEXAGON SOCKET BUTTON HEAD SCREW M4x16 HEXAGON SOCKET CAP HEAD SCREW M8x35  SLOTTED PAN HEAD SCREW M8x16 STRIP ADJUSTER SPIROL PIN 6x22	D715 - 0197 D565 - 1078 B163 - 1806 B163 - 0056 B165 - 0143 D715 - 0198 B111 - 5110
47	SADDLE CLAMP	D715 - 0172
49	HEXAGON SOCKETSETSCREW M8x35	B163 - 1757
53 54 55	APRON HANDLE GEARBOX HANDLE RANGE CHANGE HANDLE	D382 - 0078 D382 - 0137 D382 - 0146
58	HEXAGON SOCKET BUTTON HEAD SCREW M6x16	B163 - 1815



#### TRIMMINGS ASSEMBLY

TRIMMINGS ASSEMBLY A176 - 061		
Item No.	Description	Part No.
64 65 66 67 68 69	GEAR BOX EXTENSION BRACKET HEXAGON SOCKET CAP HEAD SCREW M8x30 3/4" BSP M/F 45° BEND 3/4" BSP PLUG HEXAGON SOCKET BUTTON HEAD SCREW M6x12 WASHER M6	D050 - 0744 B163 - 0055 B424 - 2255 B424 - 2815 B163 - 1900 B117 - 0048
71 72	PLUG 16mm TUBING CLIP	B715 - 1077 B233 - 1103
74	HEXAGON SOCKET BUTTON HEAD SCREW M4x10	B163 - 1804
79	BLANKING PLUG 25mm	B224 - 2240
82 83 84 85 86	ROLLER HOUSING DOWEL PIN ROLLER PIN NEEDLE BEARING NK 5/10 ANDERTON SPRING DISC	D388 - 0143 D560 - 0248 D560 - 0178 B337 - 2001 B365 - 6040
90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107	ELECTRICAL CABINET SUPPORT STUD WASHER M8 LOCK NUT M8 GEARBOX FILL BAR HEXAGON SOCKET CAP HEAD SCREW M5x20 BLANKING PLATE HEXAGON SOCKET BUTTON HEAD SCREW M8x16 SADDLE LOCKING BOLT HEXAGON SOCKET BUTTON HEAD SCREW M6x10 HEXAGON SOCKET DOME HEAD SCREW M6X16 HEXAGON SOCKET CAP HEAD SCREW M6X16 PLATED BUTTON HEAD SCREW M8x20 HEXAGON SOCKET CAP HEAD SCREW M10x80 HEXAGON SOCKET CAP HEAD SCREW M10x100 STOP PIN NUT M6 HEXAGON SOCKET SET SCREW M10x25 HEXAGON HEAD SOCKET SCREW M10x25 HEXAGON HEAD SOCKET SCREW M12	D711 - 0203 B117 - 0034 B147 - 9170 D041 - 0248 B163Y0028 D565 - 1087 B163 - 1821 D697 - 0391 B163 - 1813 B163 - 1809 B163 - 0037 B163 - 1905 B163 Y0079 B163 Y0081 D560 - 0307 B147 - 9152 B163 - 1588 B166 - 0218

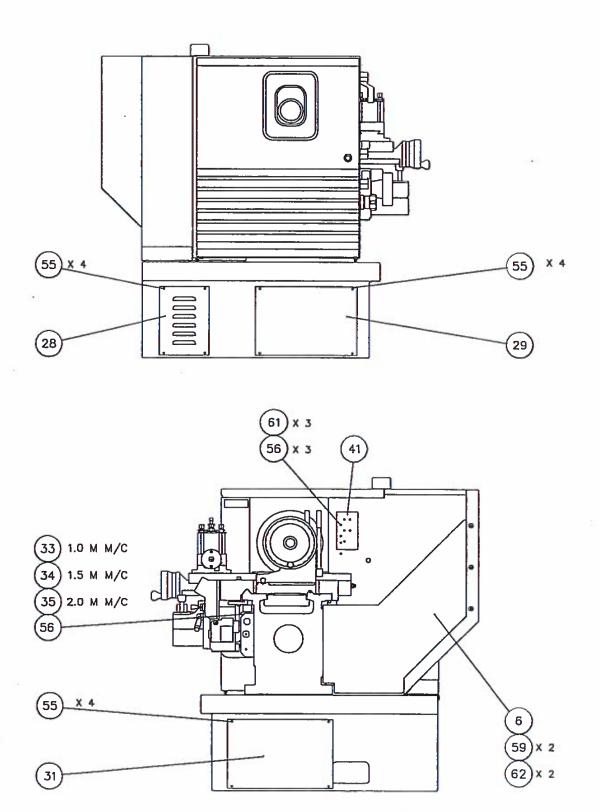
## SHEET METAL PACK (1)



#### SHEET METAL PACK

SHEET METAL PACK A137 - 002			
Item No.	De	escription	Part No.
1 2 3 4	HEAD END COVER SWARF BIN SWARF BIN SWARF BIN	1.0 METRE MACHINE 1.5 METRE MACHINE 2.0 METRE MACHINE	D132 - 0812 D382 - 0164 D382 - 0165 D382 - 0166
6 7	SPLASHGUARD SUPPORT E CABLE SUPPORT PLATE	BRACKET	D050 - 0748 D565 - 1071
9 10 11	SPLASHGUARD SPLASHGUARD SPLASHGUARD	1.0 METRE MACHINE 1.5 METRE MACHINE 2.0 METRE MACHINE	D346 - 0399 D346 - 0400 D346 - 0401
14	SPLASHGUARD BRACKET		D050 - 0750
20	STANDARD COOLANT TANK	<	D828 - 0061
22 23 24 25	PUMP MOUNTING PLATE COOLANT TANK COVER COOLANT TANK COVER COOLANT TANK COVER	1.5 METRE MACHINE	D565 - 0943 D132 - 0816 D132 - 0817 D132 - 0818
28 29 30 31 32 33 34 35	H/E PLINTH MOTOR COVER H/E PLINTH HYDRAULICS C H/E PLINTH REAR COVER T/E PLINTH COVER G/BOX EXTENSION COVER LEADSCREW COVER LEADSCREW COVER LEADSCREW COVER	OVER	D132 - 0821 D132 - 0822 D132 - 0823 D132 - 0824 D132 - 0825 D132 - 0826 D132 - 0827 D132 - 0828
39 40 41 42	LEADSCREW COVER BRAC GAP AREA COVER CHUCK GUARD MOUNTING APRON DRAIN CHUTE		D050 - 0749 D132 - 0831 D565 - 1089 D147 - 0034
48 49 50	INFILL PLATE HEADSTOCK TRUNKING TRUNKING SUPPORT BRAC	CKET	D565 - 1062 D132 - 0835 D050 - 0754
55 56 57	HEXAGON SOCKET BUTTO HEXAGON SOCKET PLATED HEXAGON SOCKET CAP HE	D BUTTON HEAD SCREW M6x12	B163 - 1813 B163 - 1900 B163 - 0037
59	HEXAGON SOCKET PLATER	D BUTTON HEAD SCREW M8x20	B163 - 1905
61 62	WASHER M6 WASHER M8		B117 - 0048 B117 - 0034
66	HEXAGON SOCKET BUTTO	N HEAD SCREW M4x10	B163 - 1804
L			

## SHEET METAL PACK (2)



tem No.	Description	Part No.
	S*4	
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		9
		4

#### MASCOT AND COMMON ACCESSORIES

#### INDEX

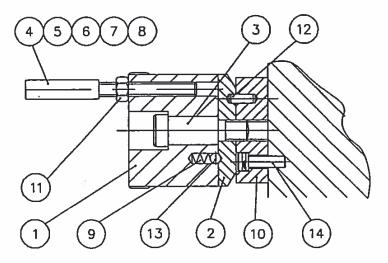
#### **ITEM**

 Bedstops. Single Position Five Position Micrometer

- Quick Change Toolpost
   4 Way Toolpost
- 3. Perspex Chipguard
- 4. Stationary Steady
- 5. Travelling Steady
- 6. Rear Toolpost and Base
- 7. Apron Dial Assembly Metric
- 8. Apron Dial Assembly Inch
- 9. Lighting
- 10. Taper Turner
- 11. Thread Dial Indicator
- 12. High Speed Threading Unit Inch
- 13. High Speed Threading Unit Metric
- 14. Heidenhain DRO Magnetic Scales Glass Scales

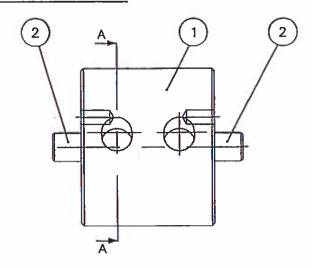
## BEDSTOPS

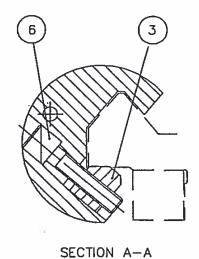
### TURRET STOP ASSEMBLY A184 - 0516



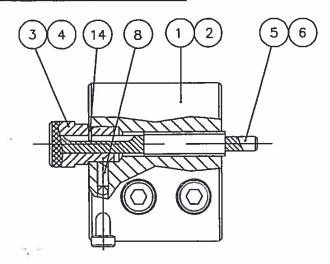
SINGLE BED STOP

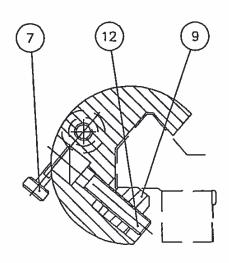
A184 - 0602





MICROMETER BED STOP A184 - 0601

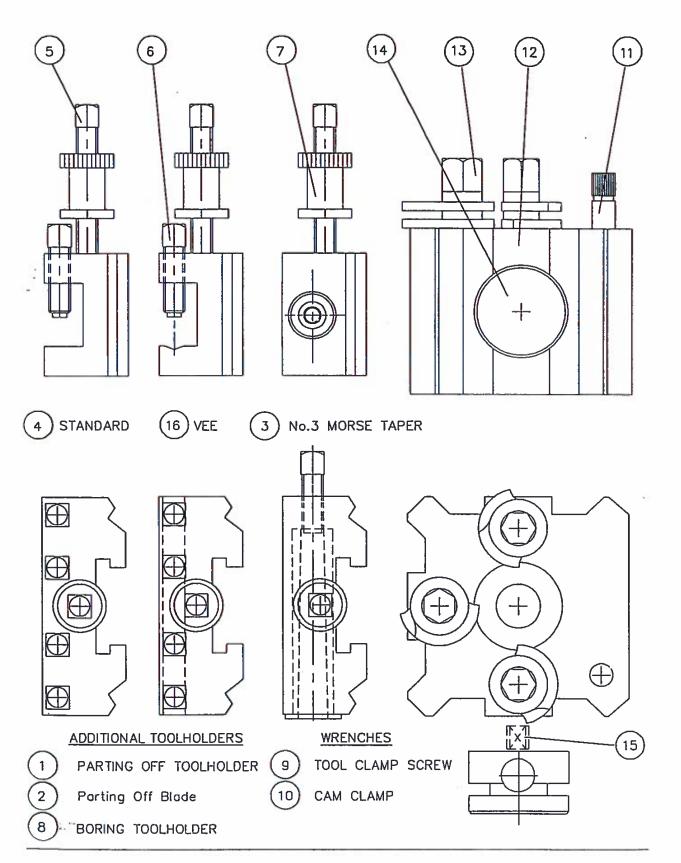




## BED STOP ASSEMBLIES

Item No.	Description	Part No.
1 2 3 4 5 6 7 8 9 10 11 12 13 14	TURRET - 5 POSITION STOP TURRET PLATE TURRET SPINDLE STOP SCREW STOP SCREW STOP SCREW STOP SCREW STOP SCREW MULTI-COMPRESSION SPRING SUB PLATE HEXAGON LOCK NUT M8 SPIROL PIN 5x12 MBK CYCLE BALL BEARING 1/4" HEXAGON SOCKET CAP HEAD SCREW M6 x20	A184 - 0516  D835 - 0016 D565 - 0930 D709 - 0049 D697 - 0351 D697 - 0352 D697 - 0353 D697 - 0354 D697 - 0355 D707 - 0033 D565 - 0931 B147 - 9170 B111 - 5089 B326 - 8107 B163 - 0038
1 2 3 6	SINGLE BED STOP ASSEMBLY  BED STOP BODY PAD - BED STOP CLAMP - BED STOP  HEXAGON SOCKET CAP HEAD SCREW 3/8"x11/2"	A184 - 0602 D712 - 0038 D557 - 0082 D131 - 0019 B163 - 7069
1 2 3 4 5 6 7 8 9	MICROMETER BED STOP (IMPERIAL) MICROMETER BED STOP (IMPERIAL) MICROMETER BED STOP (METRIC) THIMBLE (IMPERIAL) THIMBLE (METRIC) STOP ROD (IMPERIAL) STOP ROD (METRIC) CLAMP SCREW WEDGE PIN CLAMP HEXAGON SOCKET CAP HEAD SCREW 3/8"x11/2" DOWEL PIN 1/8" X 1/4"	A184 - 0601  D712 - 0039 D712 - 0036 D382 - 0069 D382 - 0073 D648 - 0052 D648 - 0055 D697 - 0183 D560 - 0128 D131 - 0019  B143 - 7069 B111 - 1041

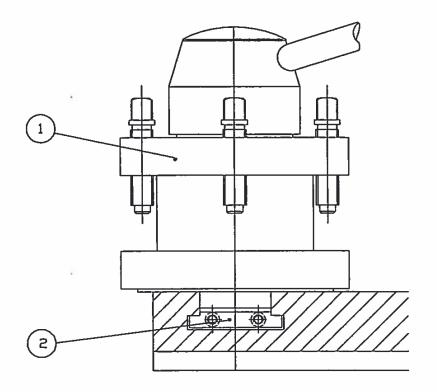
## QUICK CHANGE TOOLPOST

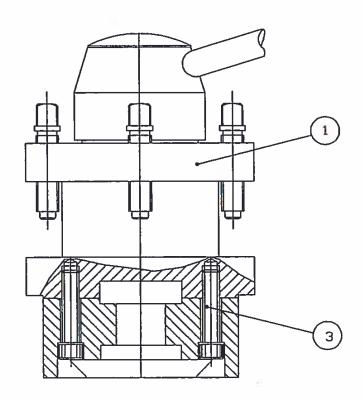


#### QUICK CHANGE TOOLPOST

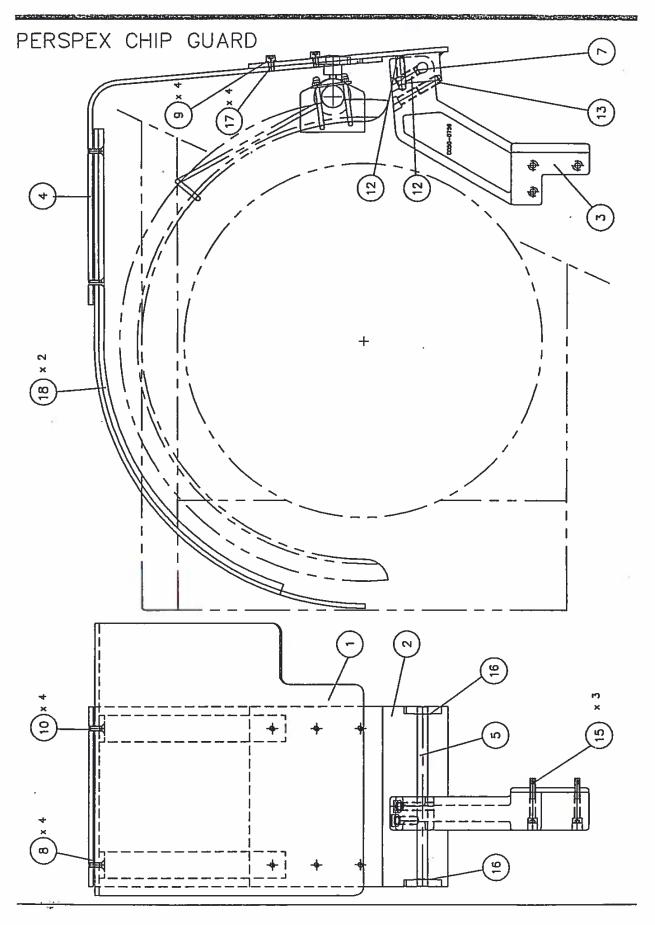
Item No.	Description	Part No.
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1		1
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## FOUR WAY TOOLPOST





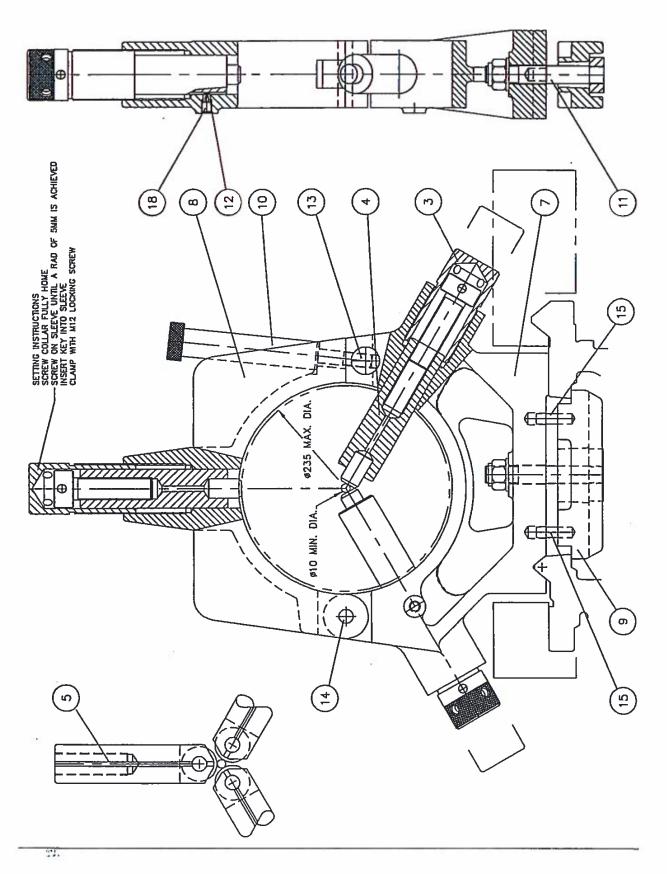
	1 TORNET TOOLFOST	7102 - 0000
Item No.	Description	Part No.
1 2 3	TYPE T4 FOUR WAY TURRET TOOLPOST COMPLETE TEE NUTS FOR SLOTTED TOPSLIDE HEXAGON SOCKET CAP HEAD SCREW 3/8"UNCx11/2" LONG	B935 - 1139 B935 - 1438 B143 - 7069
		26
b		



Page A3-i

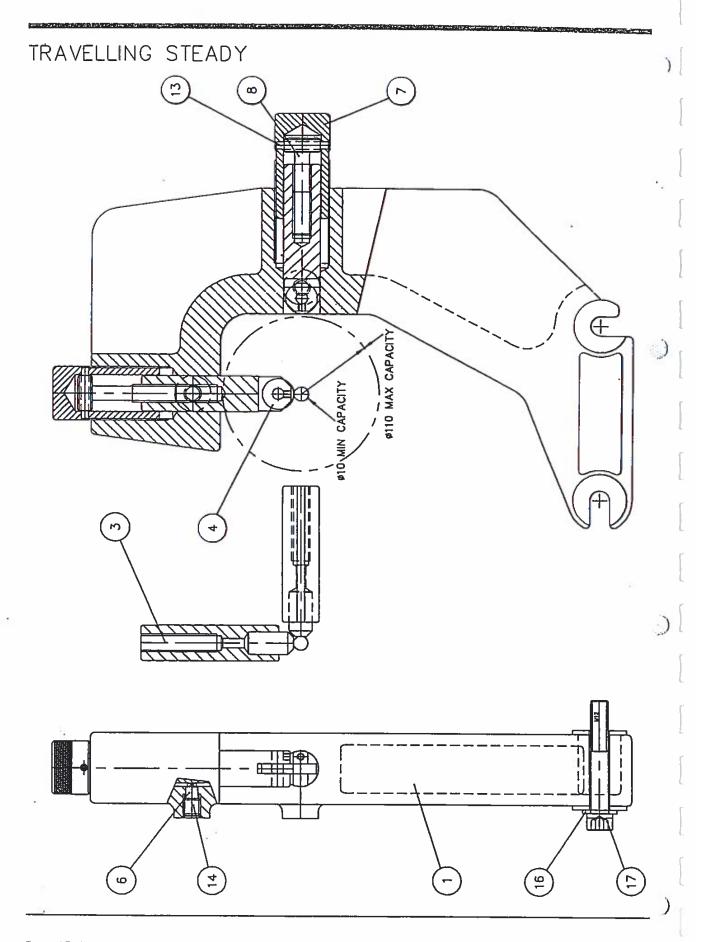
1 PERSPEX CHIP GUARD 2 LOWER SUPPORT 3 BRACKET 4 UPPER SUPPORT 5 SHAFT 7 PLUG 8 FIBRE WASHER 1/4" IDx1/2" OD 9 WASHER M6 10 HEXAGON SOCKET COUNTER SUNK SCREW M5x16 12 W/POINT SET SCREW M10x25 13 HEXAGON SOCKET COP POINT SET SCREW M10x30 15 HEXAGON SOCKET CAP HEAD SCREW M6x45 16 CIRCLIP 1400-12 17 HEXAGON SOCKET CAP HEAD SCREW M6x12  D346 - 046 D718 - 006 D718 -	PERSPEX	CHIP GUARD ASSEMBLY	A137 - 0622
2 LOWER SUPPORT 3 BRACKET 4 UPPER SUPPORT 5 SHAFT  7 PLUG 8 FIBRE WASHER 1/4" IDx1/2" OD 9 WASHER M6 10 HEXAGON SOCKET COUNTER SUNK SCREW M5x16  12 W/POINT SET SCREW M10x25 13 HEXAGON SOCKET CAP HEAD SCREW M6x45 16 CIRCLIP 1400-12 17 HEXAGON SOCKET CAP HEAD SCREW M6x12  D718 - 005 D718	Item No.	Description	Part No.
8       FIBRE WASHER 1/4" IDx1/2" OD       B411 - 000         9       WASHER M6       B117 - 000         10       HEXAGON SOCKET COUNTER SUNK SCREW M5x16       B163 - 100         12       W/POINT SET SCREW M10x25       B163 - 150         13       HEXAGON SOCKET DOG POINT SET SCREW M10x30       B163 - 170         15       HEXAGON SOCKET CAP HEAD SCREW M6x45       B163 - 000         16       CIRCLIP 1400-12       B363 - 000         17       HEXAGON SOCKET CAP HEAD SCREW M6x12       B163 - 000	2 3 4	LOWER SUPPORT BRACKET UPPER SUPPORT	D346 - 0403 D718 - 0080 D050 - 0759 D718 - 0081 D699 - 0820
13       HEXAGON SOCKET DOG POINT SET SCREW M10x30       B163 - 176         15       HEXAGON SOCKET CAP HEAD SCREW M6x45       B163 - 004         16       CIRCLIP 1400-12       B363 - 004         17       HEXAGON SOCKET CAP HEAD SCREW M6x12       B163 - 003	8 9	FIBRE WASHER 1/4" IDx1/2" OD WASHER M6	D566 - 0203 B411 - 0006 B117 - 0009 B163 - 1016
16 CIRCLIP 1400-12 B363 - 00 <sup>-1</sup> 17 HEXAGON SOCKET CAP HEAD SCREW M6x12 B163 - 00 <sup>-1</sup>			B163 - 1588 B163 - 1766
	16 17	CIRCLIP 1400-12 HEXAGON SOCKET CAP HEAD SCREW M6x12	B163 - 0043 B363 - 0012 B163 - 0036 D041 - 0251
		· ·	

## STATIONARY STEADY



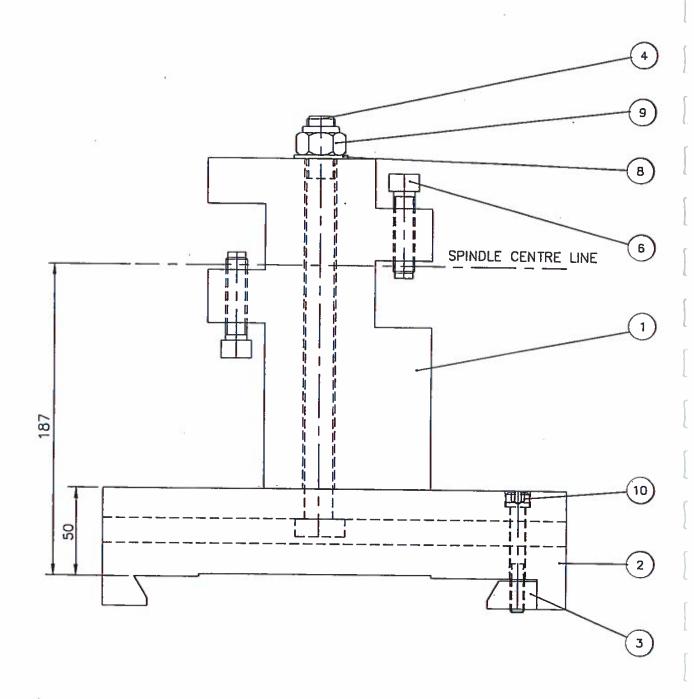
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Item No.	Description		Part No.
3 4 5	COLLAR SUB-ASSEMBLY PAD TYPE FINGER SUB-ASSEMBLY ROLLER TYPE FINGER SUB-ASSEMBLY		A820 - 0006 A882 - 0068A A882 - 0068B
7 8 9 10 11 12 13 14	STEADY BASE STEADY TOP CLAMP PLATE CLAMP SCREW CLAMP STUD ASSEMBLY KEY PIN HINGE PIN SPIROL PIN 12x40		D722 - 0066 D722 - 0067 D131 - 0043 D697 - 0388 A840 - 0053 D441 - 0082 D560 - 0321 D560 - 0322 B111 - 5167
18 19 20	DOG POINT SCREW M12x12 WASHER M20 NYLOC NUT M20		B163 - 1780 B117 - 0014 B147 - 9010
	00114901940054917	4000 0000	
4	COLLAR SUB-ASSEMBLY COLLAR	A820 - 0006	D133 - 0256
1 2	ADJUSTING SCREW		D697 - 0389
4	STEEL DOWEL 10x55		B111 - 6117
	PAD TYPE FINGER SUB-ASSEMBLY	A882 - 0068A	
1 2	PAD FINGER PAD		D300 - 0036 D421 - 0022
	ROLLER TYPE FINGER SUB-ASSEMBLY	A882 - 0068B	
4 5 6 7 8	ROLLER FINGER BEARING INA NATR 17PP PIN CONCAVE LUBRICATOR 6mm DIA. HEXAGON SOCKET SET SCREW M4x8		D300 - 0037 B337 - 1711 D560 - 0323 B454 - 2004 B163 - 1511
	CLAMP STUD ASSEMBLY	A840 - 0053	
1 2 3	STUD STUD PLATE SPIROL PIN 5x36		D711 - 0206 D565 - 1056 B111 - 5099
			1



Item No.	Description	Part No.
1	TRAVELLING STEADY CASTING	D722 - 0071
3 4	PAD TYPE FINGER SUB -ASSEMBLY ROLLER TYPE FINGERSUB -ASSEMBLY	A882 - 0069A A882 - 0069B
6 7 8	KEY COLLAR SCREW	D441 - 0082 D133 - 0257 D697 - 0390
13 14	SPIROL PIN 5x36 DOG POINT SCREW M12x12	B111 - 5099 B163 - 1780
16 17	WASHER M12 HEXAGON SOCKET CAP HEAD SCREW M12x80	B117 - 0012 B163Y0094
		52
	PAD TYPE FINGER SUB-ASSEMBLY A882 - 0069A	
1 2	PLAIN FINGER PAD	D300 - 0038 D421 - 0023
	ROLLER TYPE FINGER SUB-ASSEMBLY A882 - 0069B	
5	ROLLER FINGER PIN	D300 - 0039 D560 - 0324
9	BEARING FAG 6082Z HEXAGON SOCKET CUP POINT SET SCREW M5x5	B315 - 0208 B163 - 1547
* ¥		

## REAR TOOLPOST ASSEMBLY



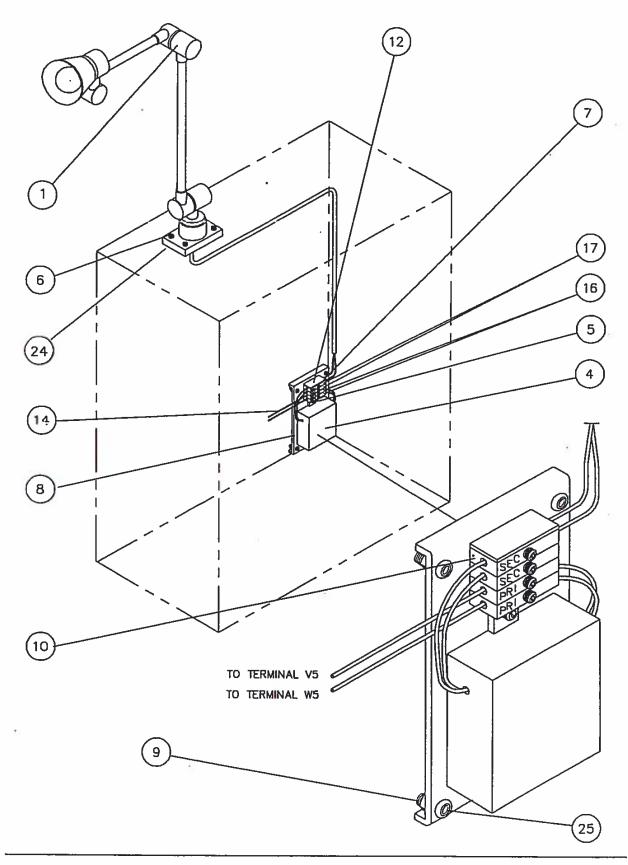
#### A182 - 0614

#### REAR TOOLPOST ASSEMBLY

TEXT 100	DLPOST ASSEMBLY	A182 - 0614
Item No.	Description	Part No.
1 2 3 4	REAR TOOLPOST BODY BASE PLATE GIB STRIP TEE BOLT	D831 - 0064 D565 - 1086 D345 - 0094 D048 - 0167
6	SQUARE HEAD SET SCREW M12x50	B170 - 0005
8 9 10	WASHER M16 NYLOC NUT M16 HEXAGON SOCKET CAP HEAD SCREW M8x60	B117 - 0013 B147Y9027 B163Y0061
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Item No.	Description	Part No.
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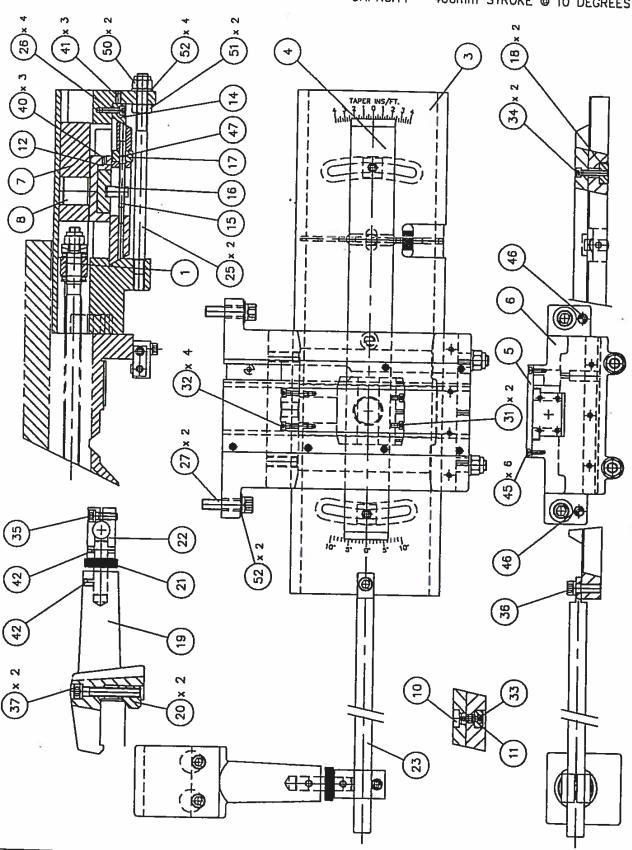
## LO-VO LIGHT ASSEMBLY



Item No. Description	Part No.
1 LO-VO LITE	B784 - 1140
4 TRANSFORMER 415v PRIMARY 50v SECONDARY	B772 - 3019
5 HEXAGON SOCKET CAP HEAD SCREW M4x8 6 HEXAGON SOCKET CAP HEAD SCREW M5x20 7 HEXAGON SOCKET CAP HEAD SCREW M3x8 8 PLATE 9 NYLOC NUT M4	B163 - 1803
6 HEXAGON SOCKET CAP HEAD SCREW M5x20	B163 Y0028
7 HEXAGON SOCKET CAP HEAD SCREW M3x8	B163Y0003
8 PLATE	D565 - 0920
9 NYLOC NUT M4	B147Y9001
10 FUSE BLOCK KLIPPON ASK 1	B718 - 2047
12 END PLATE KLIPPON AP(1.5)	B718 - 2048
14 PVC 1.0mm SQ. WIRE RED	R512 - 6002
16 FUSE R.S. 413-973 20mm 2A	B752 - 1237
17 FUSE R.S. 413-967 20mm 1A	B752 - 1235
,, , , , , , , , , , , , , , , , , , , ,	·
24 NYLOC NUT M5	B147 - 9002
25 HEXAGON SOCKET BUTTON HEAD SCREW M4x16	B163 - 1806
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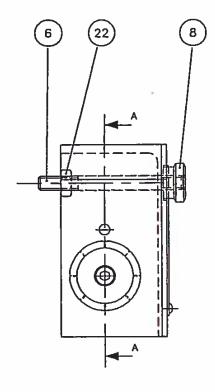
# LO-VO LIGHT ASSEMBLY (HALOGEN) TO TERMINAL V5 TO TERMINAL W5

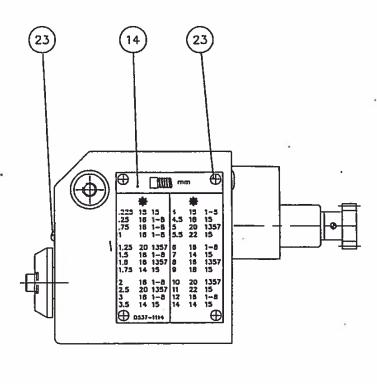
	CITI AGGEMBET (HAEGGEN)	A170 - 0506
Item No.	Description	Part No.
1 2 3 4 5 6 7 8 9 10 11	HALOGEN LIGHT HGW 70-N ADAPTOR BLOCK TRANSFORMER 63VA.380V/23V HEXAGON SOCKET CAP HEAD SCREW M5x16 PLATE FUSE BLOCK KLIPPON ASK 1 END PLATE KLIPPON AP(1.5) FUSE R.S. 413-973 20mm 1A FUSE R.S. 413-967 20mm 2A PVC 1.0mm SQ. WIRE RED HEXAGON SOCKET CAP HEAD SCREW M3x8	B784 - 1226 D047 - 0124 B772 - 3023 B163 - 0027 D565 - 0920 B718 - 2047 B718 - 2048 B752 - 1235 B752 - 1237 R512 - 6002 B163 Y0003

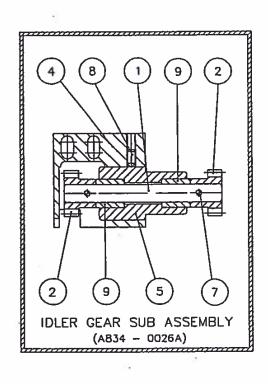


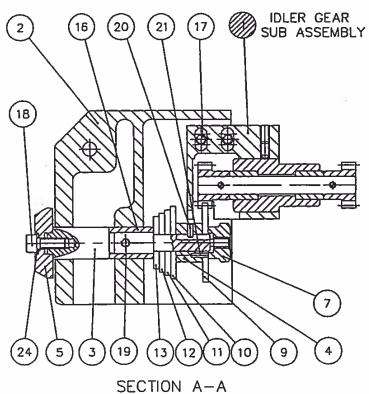
Description HOUSING PLATE SUB ASSEMBLY	Part No.  A806 - 0580A
HOUSING PLATE SUB ASSEMBLY	A806 - 0580A
	I .
GRADUATED PLATE GRADUATED SLIDE COVER PLATE SUPPORT BRACKET SLIDE SLIDING BLOCK	D565 - 1083 D705 - 0141 D565 - 1084 D050 - 0755 D705 - 0142 D047 - 0140
PIVOT PEG RETAINING WASHER GIB STRIP	D572 - 0024 D931 - 0348 D715 - 0199
GIB STRIP ADJUSTING SCREW PIVOT NUT ADJUSTING KNOB CLAMP NUT ANCHOR BRACKET ANCHOR BRACKET CLAMP ECCENTRIC PIN CLAMP BRACKET CONNECTING ROD	D715 - 0051 D697 - 0356 D536 - 0334 D443 - 0044 D047 - 0139 D050 - 0756 D047 - 0099 D271 - 0007 D050 - 0653 D648 - 0093
STUD HEXAGON SOCKET CAP HEAD SCREW M6x20	D648 - 0102 B163 - 0038
HEXAGON SOCKET CAP HEAD SCREW M5x8 HEXAGON SOCKET CAP HEAD SCREW M5x25 HEXAGON SOCKET CAP HEAD SCREW M6x16 HEXAGON SOCKET CAP HEAD SCREW M6x30 HEXAGON SOCKET CAP HEADS CREW M8x25 HEXAGON SOCKET CAP HEADSCREW M10x30 HEXAGON SOCKET CAP HEAD SCREW M10x65	B163 - 0024 B163Y0028 B163 - 0037 B163 - 0040 B163 - 0054 B163Y0068 B163 - 0076
HEXAGON SOCKETSETSCREW M5x8 HEXAGON SOCKETSETSCREW M6x10 'W' POINT SET SCREW M8x 8	B163 - 1518 B163 - 1545 B163 - 1572
HEXAGON SOCKET CAP HEAD SCREW M4x8 DOWEL 10 DIAx45 SPIROL PIN 3 DIA.x20	B163 - 0013 B111 - 6310 B111Y5060
NYLOC NUT M12 NUT M12 WASHER M12	B147Y9006 B147 - 9172 B117 - 0012
	COVER PLATE SUPPORT BRACKET SLIDE SLIDING BLOCK  PIVOT PEG RETAINING WASHER GIB STRIP ADJUSTING SCREW PIVOT NUT ADJUSTING KNOB CLAMP NUT ANCHOR BRACKET ANCHOR BRACKET CONNECTING ROD  STUD HEXAGON SOCKET CAP HEAD SCREW M6x20  HEXAGON SOCKET CAP HEAD SCREW M5x8 HEXAGON SOCKET CAP HEAD SCREW M6x26 HEXAGON SOCKET CAP HEAD SCREW M6x16 HEXAGON SOCKET CAP HEAD SCREW M6x30 HEXAGON SOCKET CAP HEAD SCREW M6x30 HEXAGON SOCKET CAP HEAD SCREW M6x30 HEXAGON SOCKET CAP HEAD SCREW M10x30 HEXAGON SOCKET CAP HEAD SCREW M10x65  HEXAGON SOCKET CAP HEAD SCREW M4x8 DOWEL 10 DIAx45 SPIROL PIN 3 DIA.x20  NYLOC NUT M12 NUT M12

# METRIC THREAD DIAL INDICATOR ASSEMBLY





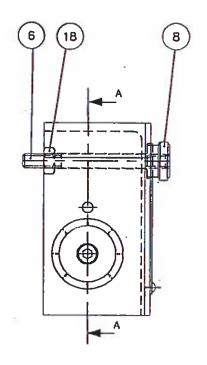


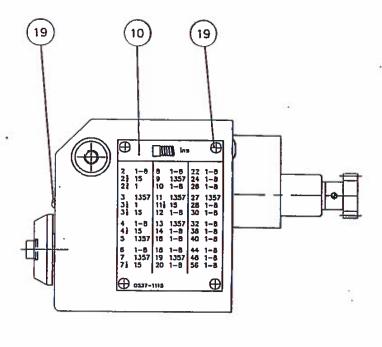


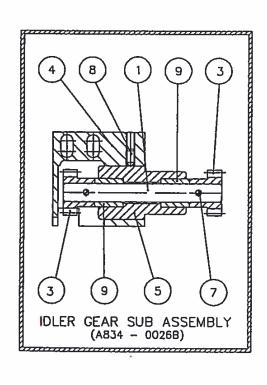
# METRIC THREAD DIAL INDICATOR ASSEMBLY

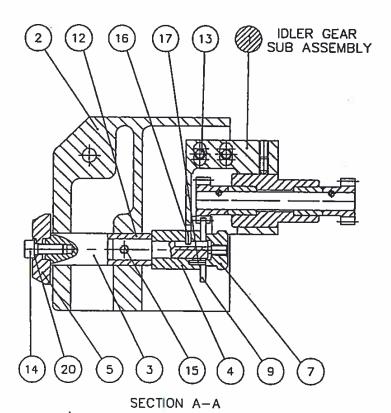
Item No.	Description	Part No.
1 2 3 4 5 6 7 8 9 10 11 12 13	IDLER GEAR SUB ASSEMBLY HOUSING SHAFT SPACER DIAL STUD THUMB NUT THUMB NUT 22 TOOTH GEAR 20 TOOTH GEAR 18 TOOTH GEAR 16 TOOTH GEAR 14 TOOTH GEAR PLATE	A834 - 0026A D388 - 0141 D699 - 0819 D708 - 0525 D232 - 0036 D711 - 0205 D536 - 0335 D536 - 0336 D344 - 0755 D344 - 0756 D344 - 0757 D344 - 0758 D344 - 0759 D537 - 1114
16 17 18 19 20 21 22 23 24	OILITE BUSH CM22x25 HEXAGON SOCKET CAP HEAD SCREW M6x50 HEXAGON SOCKET CAP HEAD SCREW M6x12 HEXAGON SOCKET CONE POINT SET SCREW M5x10 SPIROL PIN 3 DIA.x8 SPIROL PIN 3/32"DIA.x5/16" NUT M8 SELF TAPPING SCREW No.4x1/4" CRINKLE WASHER M6	B311 - 2022 B163 - 0044 B163 - 0036 B163 - 1644 B111 - 5054 B111 - 2419 B147 - 9153 B123 - 2272 B117 - 0107
1 2 4 5	IDLER GEAR SUB ASSEMBLY  IDLER GEARS SHAFT  METRIC 12 TOOTH GEAR  IDLER GEAR HOUSING  IDLER GEAR SHAFT SLEEVE	D699 - 0818 D344 - 1321 D388 - 0142 D704 - 0135
7 8 9	SPIROL PIN 3 DIA.x16 HEXAGON SOCKET CONE POINT SET SCREW M5x10 OILITE BUSH CM 20x16	B111 - 5058 B163 - 1644 B311 - 2021
	N <sup>4</sup>	

# IMPERIALTHREAD DIAL INDICATOR ASSEMBLY

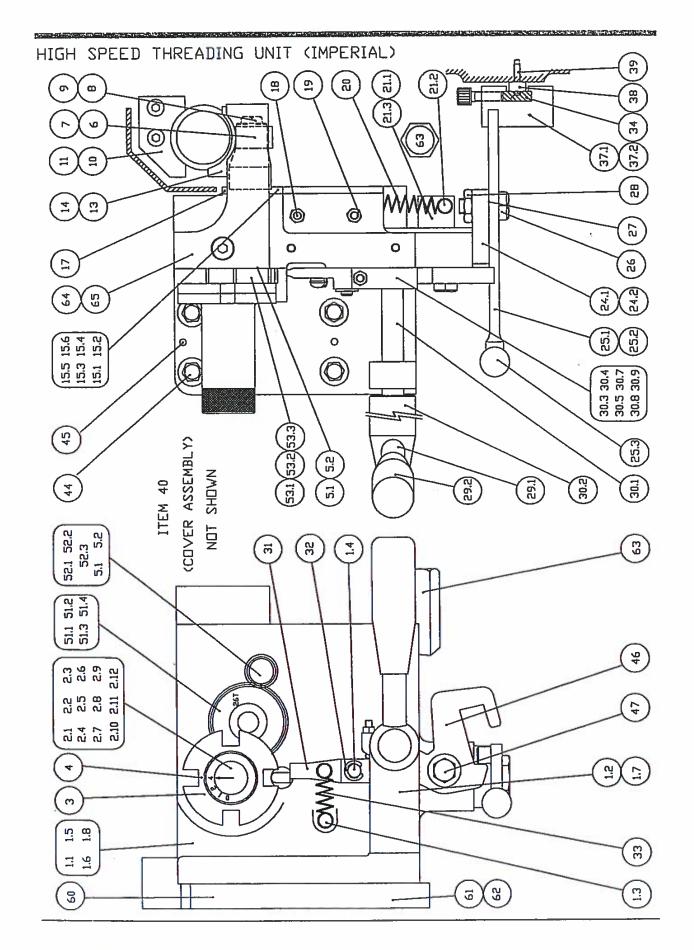








IMPERIAL	THREAD DIAL INDICATOR ASSEMBLY	A143 - 0605
Item No.	Description	Part No.
1 2 3 4 5 6 7 8 9 10	IDLER GEAR SUB ASSEMBLY HOUSING SHAFT SPACER DIAL STUD THUMB NUT THUMB NUT INDICATOR GEAR PLATE	A834 - 0026B D388 - 0141 D699 - 0819 D708 - 0526 D232 - 0036 D711 - 0205 D536 - 0335 D536 - 0336 D344 - 1323 D537 - 1115
12 13 14 15 16 17 18 19 20	OILITE BUSH CM22x25 HEXAGON SOCKET CAP HEAD SCREW M6x50 HEXAGON SOCKET CAP HEAD SCREW M6x12 HEXAGON SOCKET CONE POINT SET SCREW M5x10 SPIROL PIN 3 DIA.x8 SPIROL PIN 3/32"DIA.x5/16" NUT M8 SELF TAPPING SCREW No.4x1/4" CRINKLE WASHER M6	B311 - 2022 B163 - 0044 B163 - 0036 B163 - 1644 B111 - 5054 B111 - 2419 B147 - 9153 B123 - 2272 B117 - 0107
	IDLER GEAR SUB ASSEMBLY A834 - 0026B	
1	IDLER GEARS SHAFT	D699 - 0818
3 4 5	IMPERIAL 12 TOOTH GEAR IDLER GEAR HOUSING IDLER GEAR SHAFT SLEEVE	D344 - 1322 D388 - 0142 D704 - 0135
7 8 9	SPIROL PIN 3 DIA.x16 HEXAGON SOCKET CONE POINT SET SCREW M5x10 OILITE BUSH CM 20x16	B111 - 5058 B163 - 1644 B311 - 2021

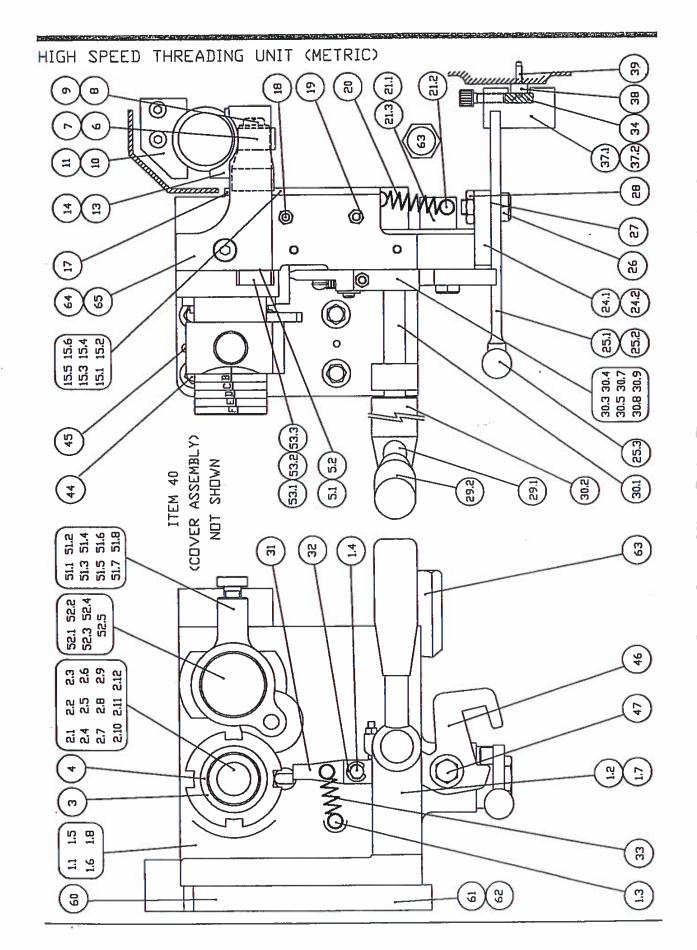


# HIGH SPEED THREADING UNIT (IMPERIAL)

Item	Description	Part No.
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7	MOUNTING BRACKET ASSEMBLY BRACKET HANDLE SHAFT BRACKET LONG ANCHOR SPRING LOCK LEVER PIVOT OILITE BEARING CT 51 1/2"idx5/8"odx7/8" OILITE BEARING CT 51 1/2"idx5/8"odx5/8" HEXAGON SOCKET CAP HEAD SCREW 1/4"BSFx7/8" HEXAGON SOCKET SET SCREW M5x12	D01010267 D01020021 D01030000 D01040000
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9	SETTING DIAL ASSEMBLY SETTING DIAL SHAFT ENGAGING DIAL SETTING DIAL SETTING DIAL PEG SETTING DIAL SPRING DIAL DRIVING GEAR TAPER PIN 3/16"X11/2" SPIROL PIN 3/32"dia.x3/8" HEXAGON SOCKET C/SUNK SCREW M5x16	D02410267 D02020000 D02030017 D02040000D D02050000 D54030263
3 4	BALL BEARING11/8"odx1/2"idx1/4" long BEARING SPACER	D04000267
5 5.1 5.2	PINION SPACER ASSEMBLY PINION SPACER HEXAGON SOCKET CONE POINT SET SCREW M5x6	D05010267
6 7 8	PINION PIN RETAINING WASHER SINGLE COIL SPRING WASHER 5dia.	D06600263 D07000000
9 10 11	HEXAGON HEADED SCREW M5x16 STEADY HEXAGON SOCKET CAP HEAD SCREW M6x30	D10000267
13 14	HALF NUT HEXAGON SOCKET CAP HEAD SCREW M8x60	D13000267
15 15.1 15.2 15.3 15.4 15.5 15.6	SLIDE ASSEMBLY SLIDE ROLLER TRACK ASSEMBLY SELECTOR PIN SHORT ANCHOR SPRING HEXAGON SOCKET SET SCREW M6x12 SPIROL PIN 3/32"dia.x3/8"	D15010267 D15020267/1&2 D15040267 D01030000S
16 17	FLAT CAGE NEEDLE ROLLER GIB	INA F2515 D17000267

	LD THILADING ONLY (IMI ELIDIE)	
Item	Description	Part No.
18 19 20 21 21.1 21.2	HEXAGON SOCKET SET SCREW M5x25 THIN HEXAGON LOCK NUT M5 MAIN SPRING  SPRING CARRIER BLOCK ASSEMBLY SPRING CARRIER BLOCK SHORT ANCHOR SPRING	D20000000  D21010015 D01030000S
21.3 24 24.1 24.2	HEXAGON SOCKET CAP HEAD SCREW 1/4"UNCx3/4"  KNOCK-OFF LEVER BRACKET ASSEMBLY KNOCK-OFF LEVER BRACKET HEXAGON SOCKET CAP HEAD SCREW1/4"UNCx1/2"	D24400015
25 25.1 25.2 25.3	KNOCK-OFF LEVER ASSEMBLY KNOCK-OFF LEVER KNOCK-OFF LEVER EXTENSION KNOB 3/4"dia. BLACK PLASTIC	D24510015 D24520015
26 27 28	KNOCK-OFF LEVER PIVOT FRICTION SPRING 3/8" DOUBLE COIL SPRING WASHER THIN HEXAGON LOCK NUT 3/8" BSF	D25000015
29 29.1 29.2	HANDLE ASSEMBLY HANDLE HANDLE KNOB	D29000021 B382 - 0064
30 30.1 30.2 30.3 30.4 30.5 30.7 30.8 30.9	HANDLE SHAFT ASSEMBLY HANDLE SHAFT HANDLE BOSS ENGAGING LEVER ENGAGING PIN LOCK-LEVER CAM HEXAGON SOCKET SPHERICAL POINT SET SCREW 2BAx1.0" THIN HEXAGON LOCK NUT 2BA TAPER PIN 3/16"x11/2"	D30010267 D30020267 D30030015 D30040000 D30050015
31 32 33 34	LOCKING LEVER CIRCLIP 3/8" ANDERTON TYPE 1500 E303 LOCKING LEVER SPRING STOP BAR	D31010019/4 D33000012 D34000267/1-4
37 37.1 37.2	ADJUSTABLE STOP ASSEMBLY ADJUSTABLE STOP HEXAGON SOCKET CAP HEAD SCREW M6x16	D37000000
38 39	STOP BAR SPACER HEXAGON SOCKET C/SUNK SCREW M6x20	D38000000

Item No.	Description	Part No.
40 40.1 40.2 40.3 40.4	COVER ASSEMBLY COVER LABEL 110/EX0434/5000-1 LABEL 110/EX0434/5000-2 ALUMINIUM ROUND HEAD RIVET 1/16"x1/8"	D40010267
41	COVER SCREW M5x8 BUTTON HEAD	
44 45 46 47	SECURING SCREW M8x30 CAP HEAD SCREW DOWEL PIN 'SELOC' 6x30 DISENGAGING LEVER DISENGAGING LEVER PIVOT	D46000015 D47000000
51 51.1 51.2 51.3 51.4	IDLER GEAR ASSEMBLY IDLER GEAR BALL BEARING 1/2"idx 11/8"odx1/4" IDLER GEAR SHAFT HEXAGON SOCKET CAP HEAD SCREW 1/4"UNCx1"	D51020263 D51012263
52 52.1 52.2 52.3	PINION SHAFT ASEMBLY PINION SHAFT GEAR BEARING SPACER	D52000267 FAG NK12/1: D52030267
60 61 62 63 64 65	MOUNTING PLATE HEXAGON SOCKET CAP HEAD SCREW M8x16 DOWEL PIN 'SELOC' 6x20 CARRIAGE STOP LOWER STEADY HEXAGON SOCKET CAP HEAD SCREW M8x30	D62000267 D10040267



# HIGH SPEED THREADING UNIT (METRIC)

Item	Description	Part No.
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7	MOUNTING BRACKET ASSEMBLY BRACKET HANDLE SHAFT BRACKET LONG ANCHOR SPRING LOCK LEVER PIVOT OILITE BEARING CT 51 1/2"idx5/8"odx7/8" OILITE BEARING CT 51 1/2"idx5/8"odx5/8" HEXAGON SOCKET CAP HEAD SCREW 1/4"BSFx7/8" HEXAGON SOCKET SET SCREW M5x12	D01010268 D01020021 D01030000 D01040000
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11	SETTING DIAL ASSEMBLY SETTING DIAL SHAFT SETTING DIAL CONTROL CONE GEARS ENGAGING DIAL SETTING DIAL INDICATOR SETTING DIAL PEG SETTING DIAL SPRING SETTING DIAL SPRING RETAINING WASHER SETTING DIAL SHAFT RETAINING WASHER HEXAGON SOCKET C/SUNK HEAD SCREW M5x16 SPIROL PIN 3/32"dia.x3/8"	D02410268 D02421012 D02422022/1-6 D02020022 D02430012 D02040000B D02050000 D02460012 D07000000
3 4	BALL BEARING 11/8"odx1/2"idx1/4" long BEARING SPACER	D04000268
5 5.1 5.2	PINION SPACER ASSEMBLY PINION SPACER HEXAGON SOCKET CONE POINT SET SCREW M5x6	D05010267
6 7 8 9 10	PINION PIN RETAINING WASHER HEXAGON HEADED SCREW M5x16 SINGLE COIL SPRING WASHER 5dia. STEADY	D06600264 D07000000 D10000267
11 13 14	HEXAGON SOCKET CAP HEAD SCREW M6x30  HALF NUT HEXAGON SOCKET CAP HEAD SCREW M8x50	D13000268
15 15.1 15.2 15.3 15.4 15.5	SLIDE ASSEMBLY SLIDE ROLLER TRACK ASSEMBLY SELECTOR PIN SHORT ANCHOR SPRING HEXAGON SOCKET SET SCREW M6x12 SPIROL PIN 3/32"dia.x3/8"	D15010267 D15020267/1&2 D15040267 D01030000S
16 17	FLAT CAGE NEEDLE ROLLER GIB	INA F2515 D17000267

# HIGH SPEED THREADING UNIT (METRIC)

item	Description	Part No.
18 19 20	HEXAGON SOCKET SET SCREW M5x25 THIN HEXAGON LOCK NUT M5 MAIN SPRING	D20000000
21 21.1 21.2 21.3	SPRING CARRIER BLOCK ASSEMBLY SPRING CARRIER BLOCK SHORT ANCHOR SPRING HEXAGON SOCKET CAP HEAD SCREW M5x25	D21010015 D01030000S
24 24.1 24.2	KNOCK-OFF LEVER BRACKET ASSEMBLY KNOCK-OFF LEVER BRACKET HEXAGON SOCKET CAP HEAD SCREW M5x25	D24400015
25 25.1 25.2 25.3	KNOCK-OFF LEVER ASSEMBLY KNOCK-OFF LEVER KNOCK-OFF LEVER EXTENSION KNOB 3/4"dia. BLACK PLASTIC	D24510015 D24520015
26 27 28	KNOCK-OFF LEVER PIVOT FRICTION SPRING 3/8" DOUBLE COIL SPRING WASHER THIN HEXAGON LOCK NUT 3/8" BSF	D25000015
29 29.1 29.2	HANDLE ASSEMBLY HANDLE HANDLE KNOB	D29000021 B382 - 0064
30 30.1 30.2 30.3 30.4 30.5 30.7 30.8 30.9	HANDLE SHAFT ASSEMBLY HANDLE SHAFT HANDLE BOSS ENGAGING LEVER ENGAGING PIN LOCK-LEVER CAM HEXAGON SOCKET SPHERICAL POINT SET SCREW 2BAx1.0" THIN HEXAGON LOCK NUT 2BA TAPER PIN 3/16"x11/2"	D30010267 D30020267 D30030015 D30040000 D30050015
31 32 33 34	LOCKING LEVER CIRCLIP 3/8" LOCKING LEVER SPRING STOP BAR	D31010019/4  D33000012  D34000267/1-4
<b>37</b> 37.1 37.2	ADJUSTABLE STOP ASSEMBLY ADJUSTABLE STOP HEXAGON SOCKET CAP HEAD SCREW M6x16	D37000000
38 39	STOP BAR SPACER HEXAGON SOCKET C/SUNK SCREW M6x20	D38000000

Item	Description	Part No.
item	Description	T GITTAU.
40 40.1 40.2 40.3 40.4	COVER ASSEMBLY COVER LABEL 110/EX0434/5000-1 LABEL PART OF ABOVE ALUMINIUM ROUND HEAD RIVET 1/16"x1/8"	D40010268
41	COVER SCREW M5x8 BUTTON HEAD	
44 45 46 47	SECURING SCREW M8x30 CAP HEAD SCREW DOWEL PIN 'SELOC' 6x30 DISENGAGING LEVER DISENGAGING LEVER PIVOT	D46000015 D47000000
51 51.1 51.2 51.3 51.4 51.5 51.6 51.7	GEAR SELECTOR ASSEMBLY IDLER GEAR CARRIER IDLER GEAR OILITE BEARING 1/2'odx3/8"idx3/16" IDLER GEAR SHAFT CIRCLIP 3/8 "(ANDERTON 1500E303) SPIROL PIN 3/32"x3/4" SELECTOR SCREW	D51011268 D51010012 D51012020 D51050020
51.8 52 52.1 52.2 52.3 524 52.5	STOP SCREW 2BAx5/16"  GATE ASSEMBLY GATE GATE ASSEMBLY GEAR BALL RACE 11/8'odx1/2"idx1/4" BEARING HEXAGON SOCKET CAP HEAD SCREW M6x20	D54010268 D54020268 FAG NKJ 9/12
53 53.1 53.2 53.3	PINION SHAFT ASEMBLY PINION SHAFT GEAR BEARING SPACER	D52000268 FAG NK12/12 D52030268
60 61 62 63 64 65	MOUNTING PLATE HEXAGON SOCKET CAP HEAD SCREW M8x16 DOWEL PIN 'SELOC' 6x20 CARRIAGE STOP LOWER STEADY HEXAGON SOCKET CAP HEAD SCREW M8x30	D62000267 D10040267

### HEIDENHAIN DROKITS

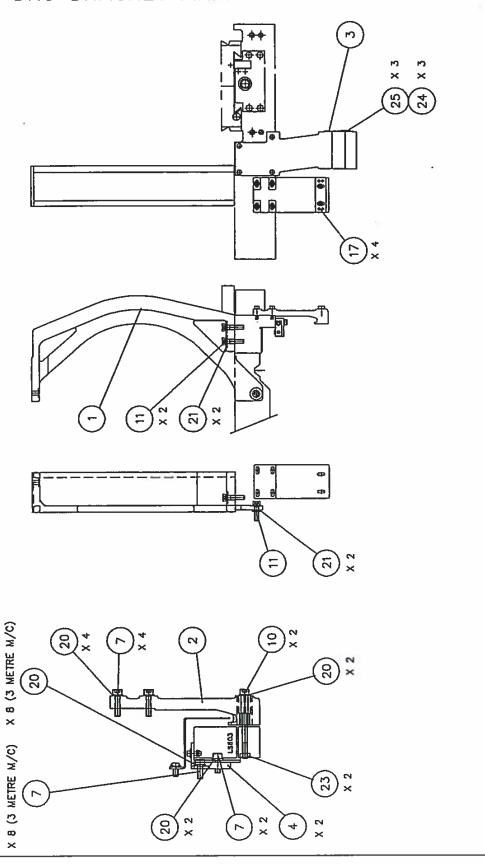
Item No.	Description	Part No.
1 2 3 4 5 10 11 12 13	HEIDENHAIN 2 AXIS DRO KIT  HEIDENHAIN CONTROL VRZ 730 2 AXIS  1.0m 2 AXIS GLASS DRO  1.5m 2 AXIS GLASS DRO  2.0m 2 AXIS GLASS DRO  3.0m 2 AXIS GLASS DRO  HEIDENHAIN CONTROL VRZ 739 2 AXIS + CSS  1.0m 2 AXIS MAGNETIC DRO  1.5m 2 AXIS MAGNETIC DRO  2.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO	B770 - 0104 A830 - 0029A A830 - 0029B A830 - 0029C A830 - 0029D B770 - 0137 A830 - 0018A A830 - 0018B A830 - 0018C A830 - 0018D
1 2 4 5 6 7 10 11 12 13 14 15	HEIDENHAIN 3 AXIS KIT  HEIDENHAIN CONTROL VRZ 770 3 AXIS  3RD AXIS GLASS DRO KIT  1.0m 2 AXIS GLASS DRO  1.5m 2 AXIS GLASS DRO  2.0m 2 AXIS GLASS DRO  3.0m 2 AXIS GLASS DRO  HEIDENHAIN CONTROL VRZ 779 3 AXIS + CSS  3RD AXIS MAGNETIC DRO  1.0m 2 AXIS MAGNETIC DRO  2.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO	B770 - 0129 B770 - 0406 A830 - 0029A A830 - 0029B A830 - 0029C A830 - 0029D B770 - 0138 A830 - 0018A A830 - 0018B A830 - 0018C A830 - 0018D
1 2 4 5 6 7 10 11 12 13	HEIDENHAIN 2AXIS + CSS KIT A830 - 0033 HEIDENHAIN CONTROL VRZ 739 2 AXIS + CSS CSS RETRO KIT 1.0m 2 AXIS GLASS DRO 1.5m 2 AXIS GLASS DRO 2.0m 2 AXIS GLASS DRO 3.0m 2 AXIS GLASS DRO HEIDENHAIN CONTROL VRZ 739 2 AXIS + CSS 1.0m 2 AXIS MAGNETIC DRO 1.5m 2 AXIS MAGNETIC DRO 2.0m 2 AXIS MAGNETIC DRO 3.0m 2 AXIS MAGNETIC DRO 3.0m 2 AXIS MAGNETIC DRO	B770 - 0137 A864 - 0028A A830 - 0029A A830 - 0029B A830 - 0029C A830 - 0029D B770 - 0137 A830 - 0018A A830 - 0018B A830 - 0018C A830 - 0018D
1 2 3 5 6 7 8 10 11 12 13 14 15	HEIDENHAIN 3 AXIS + CSS KIT  A830 - 0034  HEIDENHAIN CONTROL VRZ 779 3 AXIS + CSS  CSS RETRO KIT  3RD AXIS GLASS DRO KIT  1.0m 2 AXIS GLASS DRO  1.5m 2 AXIS GLASS DRO  2.0m 2 AXIS GLASS DRO  3.0m 2 AXIS GLASS DRO  HEIDENHAIN CONTROL VRZ 779 3 AXIS + CSS  3RD AXIS MAGNETIC DRO KIT  1.0m 2 AXIS MAGNETIC DRO  1.5m 2 AXIS MAGNETIC DRO  2.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO  3.0m 2 AXIS MAGNETIC DRO	B770 - 0138 A864 - 0028A B770 - 0406 A830 - 0029A A830 - 0029B A830 - 0029C A830 - 0029D B770 - 0138 A830 - 0022A A830 - 0018A A830 - 0018B A830 - 0018C A830 - 0018D

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# HEIDENHAIN MAGNETIC SCALE PACKS FOR HEIDENHAIN FITTINGS KIT SEE A830-0014 SUPPLY OUTLET C.S.S. OUTLET ONLY **∢** ⊠ ∪ □ 1.0 METRE PACK NIL 1.5 METRE PACK X 2 2.0 METRE PACK X 3 3.0 METRE PACK X 4 1.0 METRE PACK 2.0 METRE PACK 3.0 METRE PACK 1.5 METRE PACK 1.5 <u>1</u> (12)(13) = **o** 0 1.0 METRE PACK 2.0 METRE PACK 3.0 METRE PACK 1.5 METRE PACK N

Item No.	Description	Part No.
1 2 3 4	DRO SCALE LS603C-1020 DRO SCALE LS603C-1540 DRO SCALE LS603C-2040 DRO SCALE LS603C-3040	B770 - 0139 B770 - 0140 B770 - 0141 B770 - 0142
6	X AXIS HEIDENHAIN MAGNETIC SCALE KIT	B770 - 0403
8	HEIDENHAIN DTO FIXING KIT	A830 - 0014A
10 11 12 13	X AXIS DRO COVER 1.0m X AXIS DRO COVER 1.5m X AXIS DRO COVER 2.0m X AXIS DRO COVER 3.0m	B770 - 0143 B770 - 0144 B770 - 0145 B770 - 0146
15 16 17	Z AXIS SUPPORT BRACKET HEXAGON SOCKET BUTTON HEAD SCREW M6x10 M6 WASHER	B770 - 0147 B163 - 1813 B117 - 0009
19	MAINS CABLE	B770 - 0148
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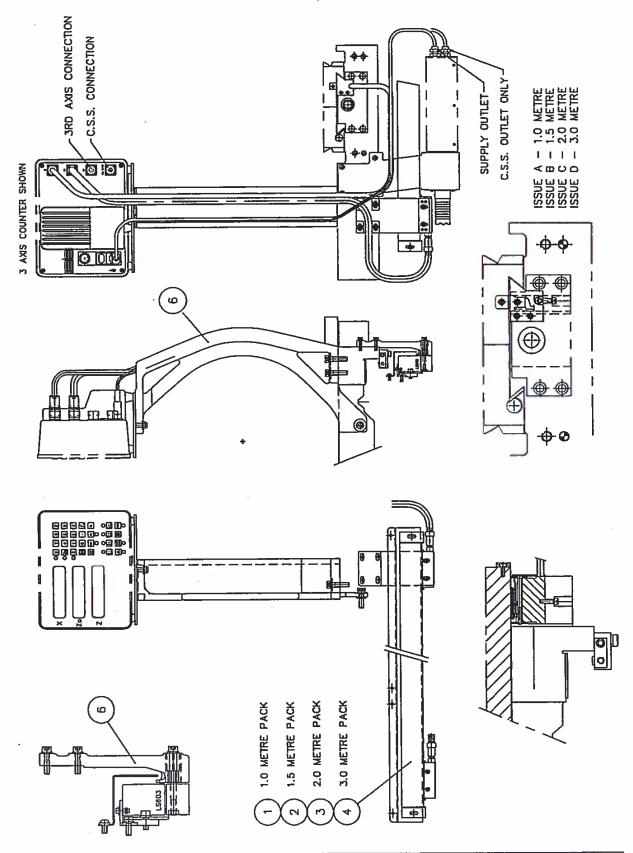
# HEIDENHAIN DRO BRACKET FIXING KIT



### DRO BRACKET KIT

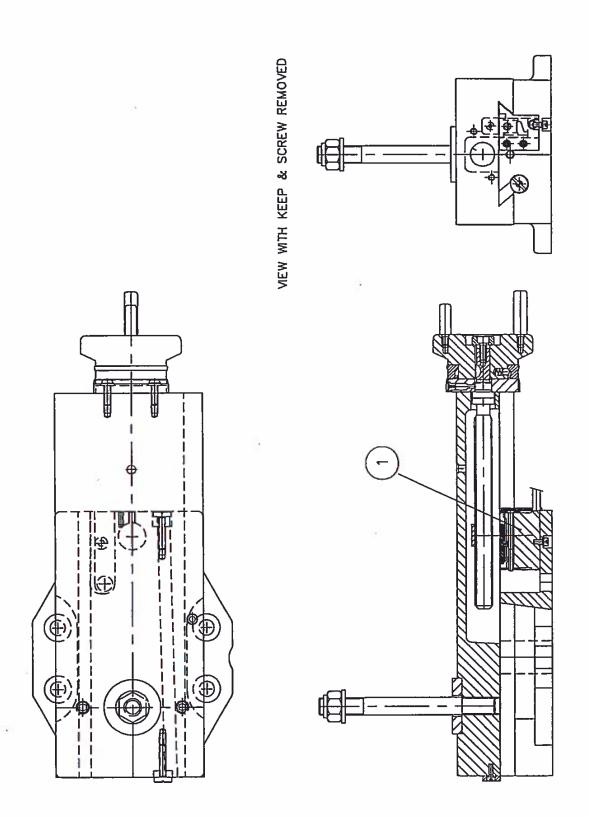
Item No. Description  DRO COUNTER HEAD BRACKET Z AXIS SCALE BRACKET  SPACER HEXAGON SOCKET CAP HEAD SCREW M6x 16  HEXAGON SOCKET CAP HEAD SCREW M6x75	D050 - 0757 D050 - 0758 D708 - 0528
2 Z AXIS SCALE BRACKET  4 SPACER  7 HEXAGON SOCKET CAP HEAD SCREW M6x 16  10 HEXAGON SOCKET CAP HEAD SCREW M6x75	D050 - 0758 D708 - 0528
7 HEXAGON SOCKET CAP HEAD SCREW M6x 16  HEXAGON SOCKET CAP HEAD SCREW M6x75	
10 HEXAGON SOCKET CAP HEAD SCREW M6x75	
10 HEXAGON SOCKET CAP HEAD SCREW M6x75	B163- 0037
11 HEXAGON SOCKET CAP HEAD SCREW M10x 40	B163Y0049 B163- 0071
17 HEXAGON SOCKET SET SCREW M4x 20	B163- 1727
20 M6 WASHER 21 M10 WASHER	B117 - 0009 B117Y0011
23 M6x1.0 THIN NUT	B147 - 9169

# HEIDENHAIN DRO ASSEMBLY (MAGNETIC) X & Z AXIS



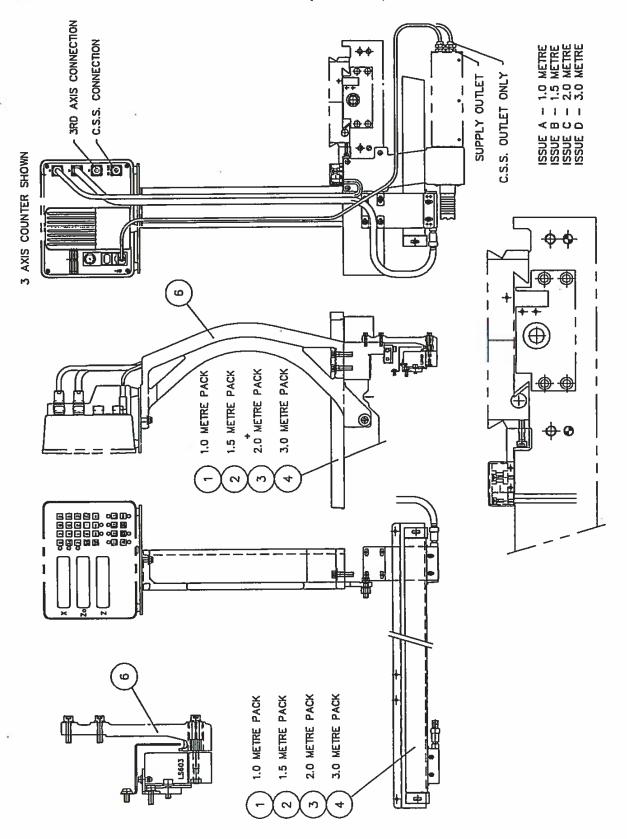
1 1.0m MAGNETIC SCALE PACK A830 - 0011A 2 1.5m MAGNETIC SCALE PACK A830 - 0011B 3 2.0m MAGNETIC SCALE PACK A830 - 0011C 4 3.0m MAGNETIC SCALE PACK A830 - 0011D	ILIDEIN D	ANY DITO KIT (WACHETTO)	7030 - 0010
2 1.5m MAGNETIC SCALE PACK A830 - 0011B 3 2.0m MAGNETIC SCALE PACK A830 - 0011C 4 3.0m MAGNETIC SCALE PACK A830 - 0011D	Item No.	Description	Part No.
6 DRO BRACKET KIT  A830 - 0015A	1 2 3 4	1.5m MAGNETIC SCALE PACK 2.0m MAGNETIC SCALE PACK	A830 - 0011A A830 - 0011B A830 - 0011C A830 - 0011D
	6	DRO BRACKET KIT	A830 - 0015A
	1		
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# HEIDENHAIN 3RD AXIS MAGNETIC SCALE KIT



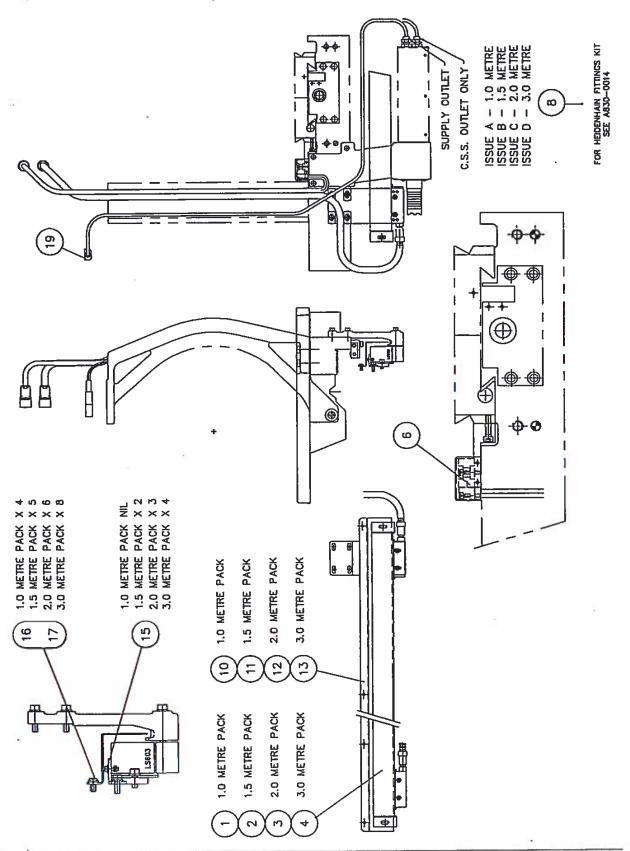
Item No.	Description	Part No.
1	3RD AXIS DRO MAGNETIC SCALE	B770 - 0404
	*)	

# HEIDENHAIN DRO ASSEMBLY (GLASS) X & Z AXIS



	AIN DAO ASSEMBLY (GLASS)	A050 - 0029
item No.	Description	Part No.
1 2 3 4	1.0m GLASS SCALE PACK 1.5m GLASS SCALE PACK 2.0m GLASS SCALE PACK 3.0m GLASS SCALE PACK	A830 - 0030A A830 - 0030B A830 - 0030C A830 - 0030D
6	DRO BRACKET KIT	A830 - 0015A
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# HEIDENHAIN GLASS SCALE PACKS



# HEIDENHAIN GLASS SCALE PACK

1EIDENHA	AIN GLASS SCALE PACK	A030 - 0030
Item No.	Description	Part No.
1 2 3 4	DRO SCALE LS603C-1020 DRO SCALE LS603C-1540 DRO SCALE LS603C-2040 DRO SCALE LS603C-3040	B770 - 0139 B770 - 0140 B770 - 0141 B770 - 0142
6	X AXIS HEIDENHAINGLASS SCALE KIT	B770 - 0405
8	HEIDENHAIN DRO FIXING KIT	A830 - 0014A
10 11 12 13	X AXIS DRO COVER 1.0m X AXIS DRO COVER 1.5m X AXIS DRO COVER 2.0m X AXIS DRO COVER 3.0m	B770 - 0143 B770 - 0144 B770 - 0145 B770 - 0146
15 16 17	Z AXIS SUPPORT BRACKET HEXAGON SOCKET BUTTON HEAD SCREW M6x10 M6 WASHER	B770 - 0147 B163 - 1813 B117 - 0009
19	MAINS CABLE	B770 - 0148

# **MASTIFF PARTS**

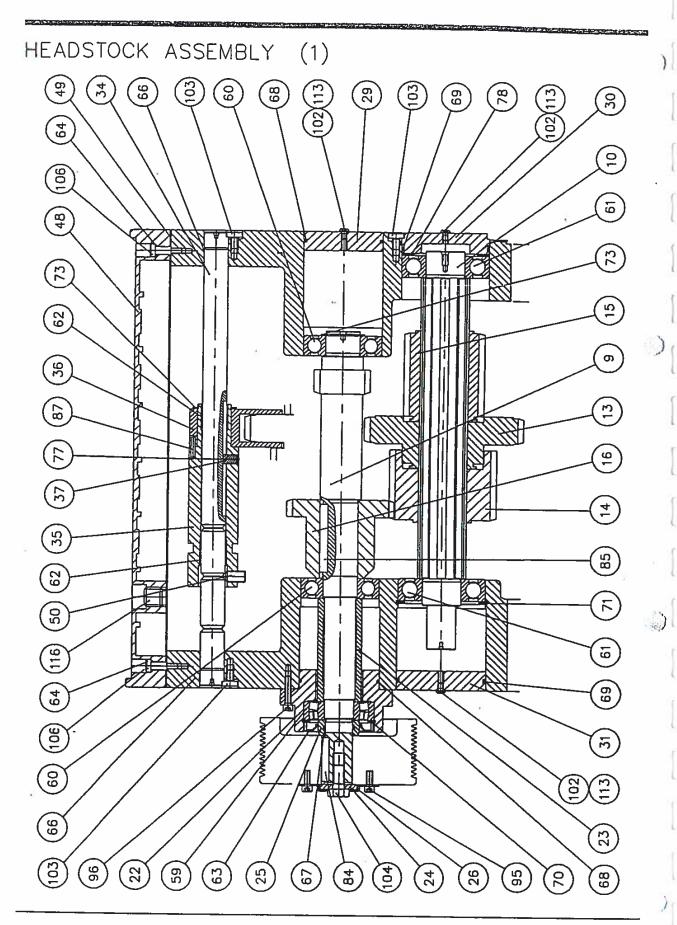
### **INDEX**

### ITEM

- 1. Headstock Assembly
- 2. Reversing Box Assembly
- 7. Top Slide Assembly
- 8. Tailstock Assembly
- 14. Belts and Pulleys
- 20. Nameplates
- 22. Sheet Metal Pack
- 23. Standard Equipment

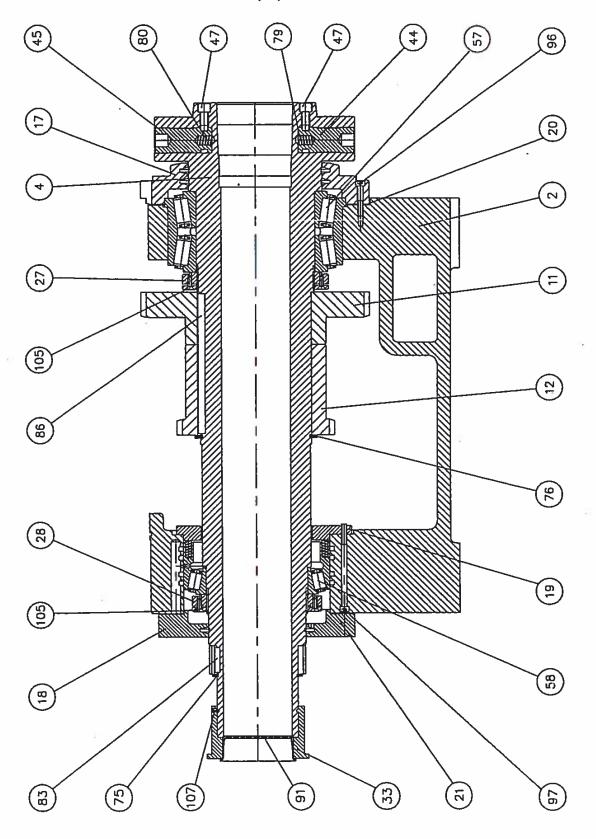
**MASTIFF ACCESSORIES** 

HEADSTOCK



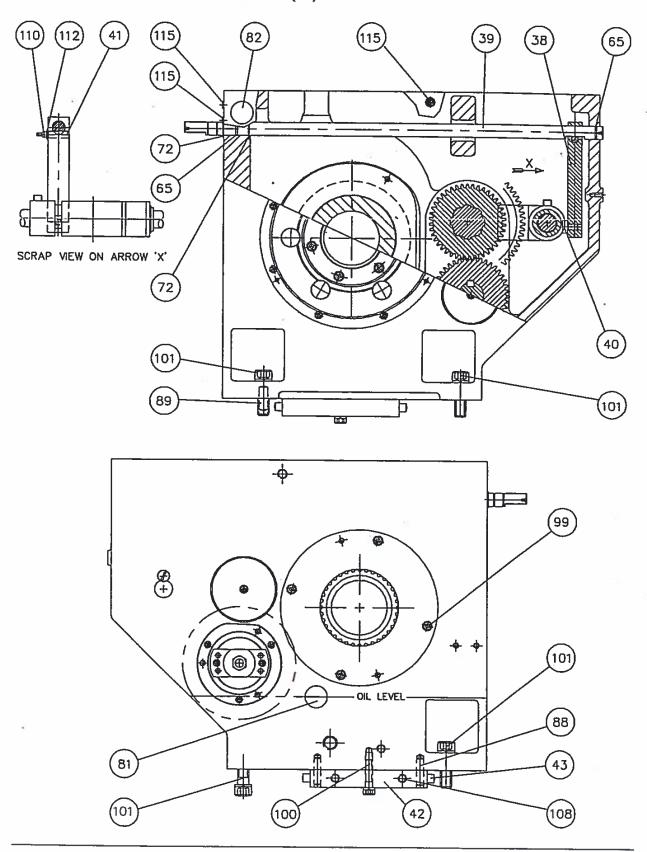
Item No.	Description	Part No.
2	HEADSTOCK CASTING	D384 - 0061
4	MAIN SPINDLE	D709 - 0053
9	INPUT SHAFT	D699 - 0804
10	SPLINE SHAFT	D699 - 0805
11	101T GEAR	D344 - 1291
12	69T GEAR	D344 - 1292
13	63T GEAR	D344 - 1293
14	42T GEAR	D344 - 1294
15	31T GEAR	D344 - 1295
16	42T GEAR	D344 - 1296
17	FRONT BEARING COVER	D132 - 0799
18	BACK BEARING OUTER COVER	D132 - 0800
19	BACK BEARING INNER COVER	D132 - 0809
20	FRONT BEARING COVER GASKET	D343 - 0186
21	BACK BEARING COVER GASKET	D343 - 0187
22	INPUT SHAFT HOUSING	D388 - 0138
23	INPUT SHAFT BEARING SPACER	D708 - 0512
24	HEADSTOCK PULLEY SPACER	D708 - 0464
25	HEADSTOCK PULLEY SPACER	D708 - 0462
26	HEADSTOCK PULLEY TAB WASHER	D931 - 0342
27	FRONT BEARING NUT	D536 - 0328
28	BACK BEARING NUT	D536 - 0330
29	INPUT SHAFT PLUG	D566 - 0198
30	SPLINE SHAFT PLUG	D566 - 0199
31	SPLINE SHAFT PLUG	D566 - 0200
33	COOLANT THROWER	D646 - 0059
34	BAR-SHIFT SUPPORT	D041 - 0247
35	SHIFTER TUBE	D834 - 0046
36	GEAR SHIFTER FORK	D299 - 0073
37	KEY-SHIFTER TUBE	D441 - 0076
38	GEAR SHIFT BLOCK	D047 - 0130
39	GEAR SHIFT SHAFT	D699 - 0810
40	SHIFTER FORK	D299 - 0068
41	COTTER PIN	D560 - 0288
42	SET OVER PAD	D557 - 0154
43	SET OVER PIN	D560 - 0297
45	SPINDLE NOSE CAM	D123 - 0072
47	CAM SCREW	D697 - 0206
48	HEADSTOCK COVER	D132 - 0805
49	HEADSTOCK COVER GASKET	D343 - 0185
50	ESLOK SPRING PLUNGER	D567 - 0058
57	FRONT BEARING (SPECIAL GAMET BASED ON 164.133X/164.196XHS)	B336 - 1787
58	REAR BEARING (SPECIAL GAMET BASED ON 105.115X/105.165)	B336 - 1353
59	ROLLER BEARING (SKF 21306CC)	B325 - 7501
60	FAG BEARING 6307	B313 - 2417
61	FAG BEARING 6308	B313 - 2420

# HEADSTOCK ASSEMBLY (2)

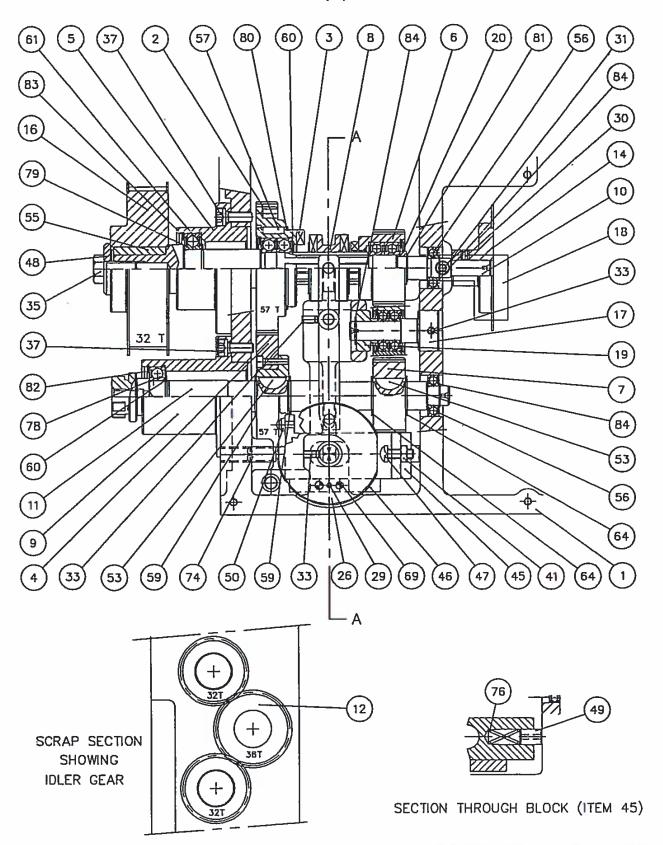


Item No.	Description	Part No.
62 63 64 65 66 67 68 69 70 71 72 73	GLACIER BUSH MB2525DU OIL SEAL M42X72x8-42 O RING 200/011/4460 O RING DOWTY REF 202-518 O RING DOWTY REF 202-524 O RING DOWTY REF 202-649 O RING DOWTY REF 202-740 O RING DOWTY REF 202-742 CIRCLIP ANDERTON 1300-72 CIRCLIP ANDERTON 1400-19 CIRCLIP ANDERTON 1400-35	B311 - 1564 B414 - 3221 B412 - 0011 B413 - 0161 B413 - 0221 B413 - 0276 B413 - 0745 B413Y0800 B363 - 0472 B363 - 0490 B363 - 0019 B363 - 0035
75 76 77 78	CIRCLIP ANDERTON 1400-110 CIRCLIP ANDERTON 1400-125 PLAIN WIRE RING 1000-200 SCHNORR DISC SPRING 6308	B363 - 0110 B363 - 0125 B362 - 1027 B365 - 6432
80 81 82 83 84 85 86 87 88	SPRING FLEXO REF123308 OIL SIGHT SK 1185 C4610 OIL SIGHT IC 4611 KEY 6x6x28 KEY 8x7x45 KEY 10x8x70 SPINDLE KEY SPIROL PIN 4x20 SPIROL PIN 10x40 DOWEL 12x36	B365 - 1177 B454 - 1002 B454 - 1001 B343 - 5049 B343Y5108 B343 - 5117 D441 - 0083 B111 - 5076 B111 - 5160 B111Y7093
91	PLASTIC PLUG MOSS 10253	B224 - 2311
95 96 97	HEXAGON SOCKET CAP HEAD SCREW M6x16 HEXAGON SOCKET CAP HEAD SCREW M6x30 HEXAGON SOCKET CAP HEAD SCREW M8x95	B163 - 0037 B163 - 0040 B163 - 0151
99 100 101 102 103 104 105 106 107	HEXAGON SOCKET CAP HEAD SCREW M8x30 HEXAGON SOCKET CAP HEAD SCREW M10x40 HEXAGON SOCKET CAP HEAD SCREW M16x50 HEXAGON SOCKET BUTTON HEAD SCREW M6x10 SLOTTED PAN HEAD SCREW M8x12 HEXAGON HEAD SCREW M12x25 HEXAGON SOCKET C/SK SCREW M5x16 SHOULDER SCREW M8x16 SET SCREW M5x6 WEDGLOK SET SCREW M12x20	B163 - 0055 B163 - 0071 B163 - 0102 B163 - 1813 B165 - 0147 B166 - 0097 B163 - 1016 B163 - 1856 B163 - 1642 B164 - 0170
110	NYLOC NUT M5	B147 - 9002
112 113	WASHER M5 : FIBRE WASHER 1100x6 ID	B117 - 0032 B117 - 0151
115 116	HEXAGON SOCKET PLUG 1/8" BSPT HEXAGON SOCKET PLUG 1/2" BSPT	B424 - 3200 B424 - 3210

# HEADSTOCK ASSEMBLY (3)

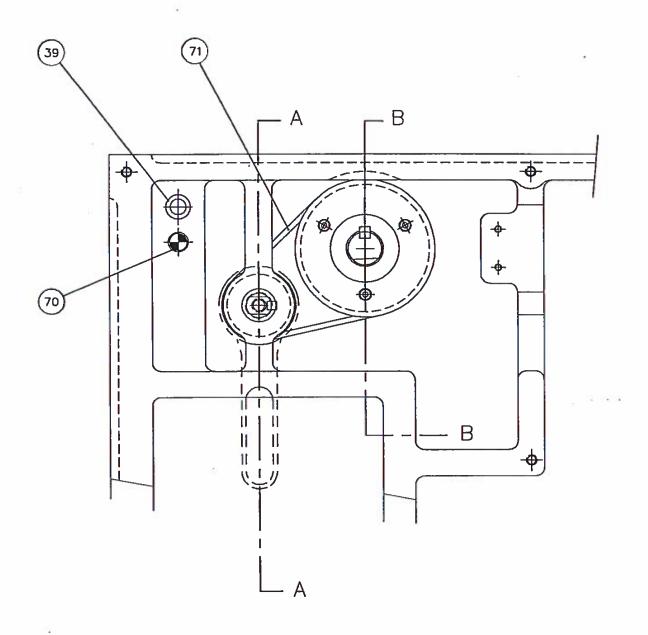


# REVERSING BOX ASSEMBLY (1)



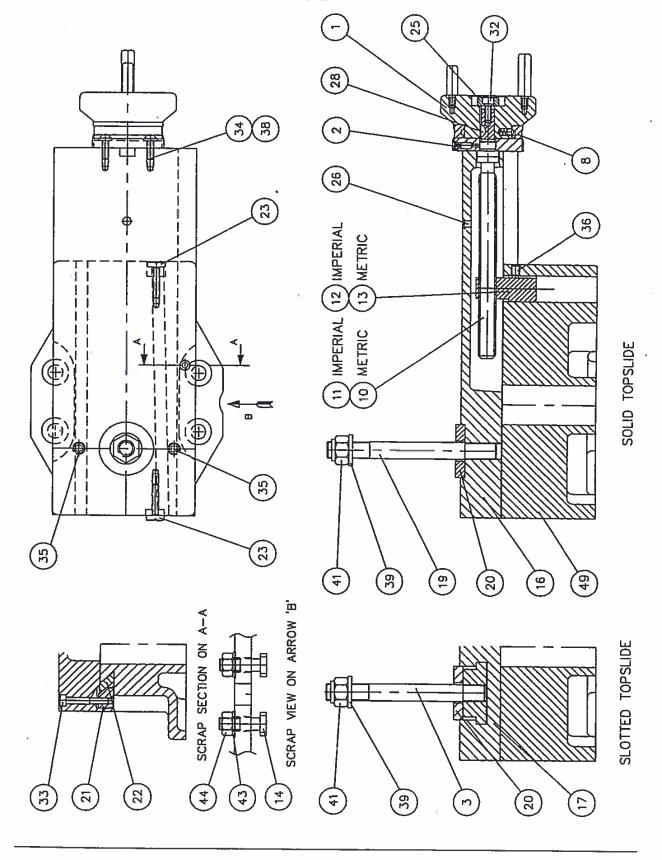
Item No.	Description	Part No.
		DOSC ASST
1	REVERSING BOX	D053 - 0085
2	GEAR	D344 - 1257
3	SPACER SUB-ASSEMBLY	A806 - 0558
4	GEAR SUB-ASSEMBLY	A806 - 0560
5	INPUT SHAFT HOUSING	D388 - 0123
6	32T GEAR SUB-ASSEMBLY	A806 - 0576
7	32T GEAR	D344 - 1317
8 [	CLUTCH BOBBIN	D051 - 0006
9 1	OUTPUT SHAFT HOUSING	D388 - 0124
10	INPUT SHAFT	D699 - 0777
11	OUTPUT SHAFT	D699 - 0778
12	36T GEAR SUB-ASSEMBLY	A806 - 0577
14	SENSOR MOUNTING SPIGOT SUB-ASSEMBLY	A806 - 0561
16	32T PULLEY SUB-ASSEMBLY	A824 - 0036
17	IDLER SHAFT	D699 - 0816
18	SENSOR MOUNTING BRACKET	D050 - 0677
19	IDLER SHAFT SPACER	D708 - 0521
20	INPUT SHAFT SPACER	D708 - 0459
21	PLUG	D566 - 0202
22	SHIFTER PAD	D299 - 0067
23	SHIFTER BAR	D041 - 0230
24	SHIFTER PIVOT SHAFT	D699 - 0779
25	REVERSE LEVER SHAFT	D699 - 0781
26	SHIFTER DISC	D233 - 0023
27	SHIFTER PIN	D560 - 0295
29	HEXAGON SOCKET CAP HEAD SCREW M4x20	B163Y0017
30	HEXAGON SOCKET SET SCREW M6x6	B163 - 1560
31	HEXAGON SOCKET CAP HEAD SCREW M6x12	B163 - 0036
32	HEXAGON SOCKETSET SCREW M12x16	B163 - 1781
33	HEXAGON SOCKETSET SCREW M6x8	B163 - 1740
35	HEXAGON SOCKET CAP HEAD SCREW M4x20	B163Y0017
27	HEXAGON SOCKET CAP HEAD SCREW M8x20	B163 - 0053
37 38	HEXAGON SOCKET CAP HEAD SCREW M4x10	B163Y0014
38	HEXAGON SOCKET CAP HEAD SCREW M8x25	B163 - 0054
41	LOCK NUT M6	B147 - 9170
45	BLOCK	D047 - 0104
46	BLOCK	D047 - 0105
48	INPUT PULLEY SPACER	D708 - 0468
49	PIN	D560 - 0303
50	PIN	D560 - 0304
53	WOODRUFF KEY 6x9x22	B343 - 2009
54	KEY 6x6x10	B343 - 5041
55	KEY 8x7x40	B343 - 5107
56	BALL BEARING 6002 2Z	B315 - 0410
57	KEY (ROUNDED ENDS) 5x5x16	B343 - 5031
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# RANGE CHANGE (REVERSING BOX ASSEMBLY 2)



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# MASTIFF TOPSLIDE ASSEMBLY

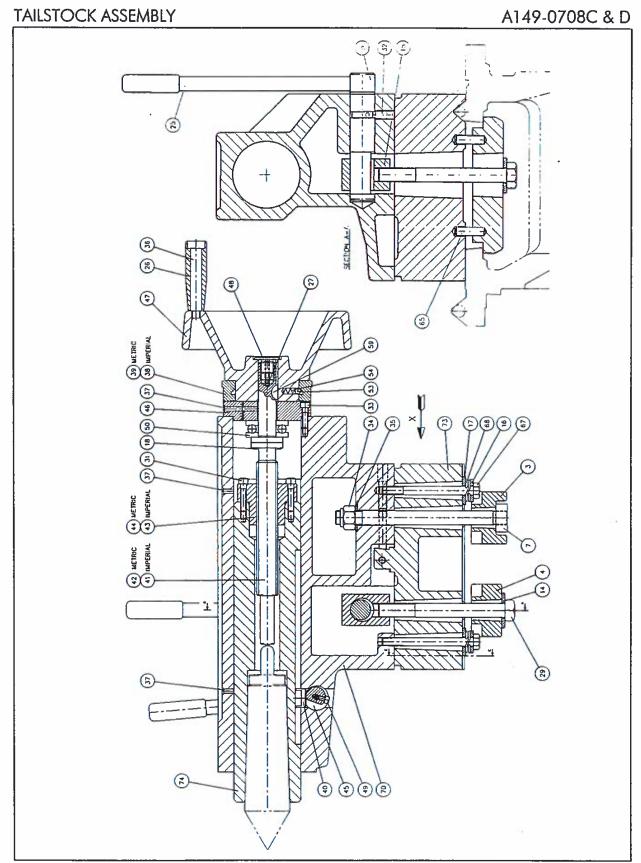


#### TOPSLIDE ASSEMBLY

OPSLIDE ASSEMBLY A125 - 0604					
Item No.	Description	Part No.			
1 2 3	TOPSLIDE HANDWHEEELSUB-ASSEMBLY TOPSLIDE KEEP SUB-ASSEMBLY CLAMP BOLT SUB-ASSEMBLY	A842 - 0027 A806 - 0584 A812 - 0013			
8 9 10 11 12 13	METRIC INDEX RING IMPERIAL INDEX RING METRIC TOPSLIDE SCREW IMPERIAL TOPSLIDE SCREW METRIC TOPSLIDE NUT IMPERIAL TOPSLIDE NUT SWIVEL SLIDE BOLT	D424 - 0158 D424 - 0143 D697 - 0372 D697 - 0373 D536 - 0313 D536 - 0314 D048 - 0163			
16 17	SOLID TOPSLIDE SLOTTED TOPSLIDE	D705 - 0125 D705 - 0126			
19 20 21 22 23 24 25 26 27 28 32 33 34 35	TOOLHOLDER STUD COLLAR LOCK PAD GIB STRIP GIB ADJUSTING SCREW COMPRESSION SPRING PIN CONCAVE LUBRICATOR 6mm BALL BEARING 1/4" WOODRUFF KEY 13x5x3  HEXAGON SOCKET WEGLOK CAP HEAD SCREW M6x16 HEXAGON SOCKET CAP HEAD SCREW M6x40 HEXAGON SOCKET BUTTON HEAD SCREW M6x20 HEXAGON SOCKET CUP SET SCREW M12	D711 - 0200 D133 - 0124 D557 - 0144 D345 - 0080 D697 - 0345 D707 - 0021 D560 - 0296 B454 - 2004 B326 - 8107 B343 - 2002 B164 - 0037 B163 - 0042 B163 - 1816 B163 - 1594			
36 38 39	HEXAGON SOCKET DOG POINT SET SCREW M8x12  WASHER M6 WASHER M16	B163Y1752 B117 - 0009 B117 - 0013			
41	NYLOC NUT M16	B147 - 9008			
43 44	WASHER M12 NUT M12	B117 - 0012 B147 - 9155			
49	SWIVEL SLIDE	D705 - 0140			

#### TOPSLIDE SUB-ASSEMBLIES

OF OLIDE	: SUB-ASSEWIBLIES	A125 - 0604
Item No.	Description	Part No.
1 2 3	HANDWHEELSUB-ASSEMBLY A842 - 0027  HANDWHEEL LONG HANDLE SHORT HANDLE	D383 - 0113 D382 - 0140 D382 - 0141
1 2 3	KEEP SUB-ASSEMBLY A806 - 0584  KEEP RING CONCAVE LUBRICATOR 6mm	D442 - 0087 D646 - 0013 B454 - 2004
1 2	CLAMP BOLT SUB-ASSEMBLY A812 - 0013 TOOLHOLDER STUD FLANGE STUD	D296 - 0019 D711 - 0201



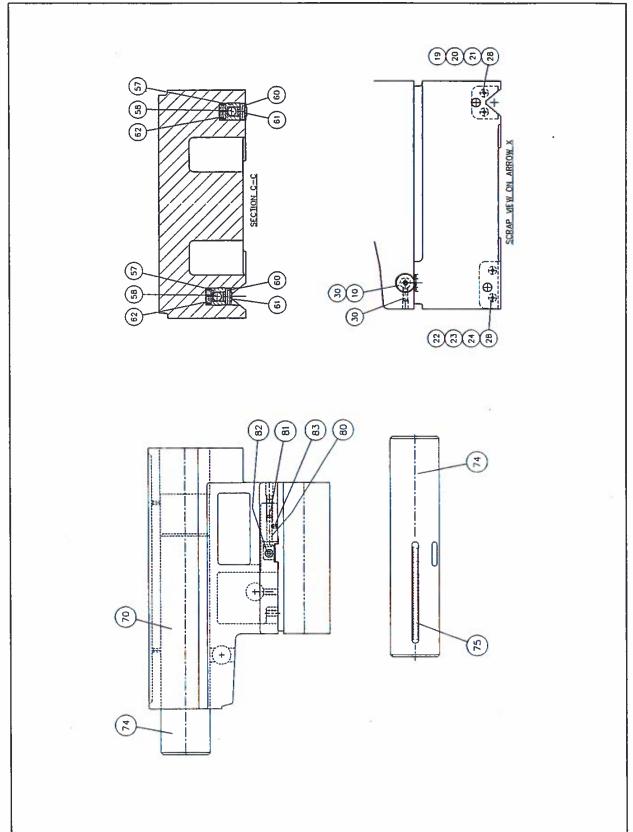
## A149-0708C & D

#### TAILSTOCK ASSEMBLY

Item No.	Part Number	Description	Qty
3	D131-0043	CLAMP PLATE REAR TAILSTOCK	1
4	D131-0044	CLAMP PLATE FRONT TAILSTOCK	1
5*	A840-0050A	CLAMP LEVER TAILSTOCK SUB-ASSEMBLY	1
*7*		CLAND CTUD CUD ACCEARDIN	
7*	A840-0051B	CLAMP STUD SUB-ASSEMBLY	1
10	D699-0782	SHAFT DHOBI MARK	1
14	D931-0359	WASHER- TAILSTOCK CLAMP PLATE	1
15	D047-0131	BLOCK CLAMP TAILSTOCK	1
16	D931-0358	WASHER-TAILSTOCK CLAMPING	2 2
17	D931-0360	WASHER-TAILSTOCK CLAMPING	
18	D931-0315	NYLON 66 OR EQUIV WASHER	1
19	D725-0027	VEE SHIELD	1
20	D707-0068	SPRING 6,7,8&10 IN M/CS	1
21	D937-0018	BED VEE WIPER	1
22	D725-0013	WIPER FLAT SHIELD	1
23	D707-0051	LEAF SPRING	1
24	D937-0010	BED FLAT WIPER	1
25	D382-0107	HANDLE	2
26	D382-0127	HANDLE TAILSTOCK	1
27	B163-1657	SET SCREW CONE PT.M 6X 40 HEXAGON	1
28	FS-0290	M5 X 16 BUTTON HEAD CAP SCREW	4
29	D048-0165	BOLT-ESLOK TAILSTOCK	1
30	FS-0354	M6X16 HALF DOG POINT SCREW	2 4
31	FS-0170	M8 X 40 SOCKET HEAD CAP SCREW	
32	FS-0380	M12 X 20 DOG POINT SCREW	2
33	FS-0166	M8 X 30 SOCKET HEAD CAP SCREW	4
34	FS-0979	M20 NYLOC NUT	
35	FP-0100	M20 BRIGHT WASHER	
36	B163-1884	SHOULDER SCREW 16 DIA X 90 LG	
37	OC-0010	6MM DRIVE IN CONCAVE OIL NIPPLES 6 DIA	3
38	D424-0163	INDEX RING - IMPERIAL	1
39	D424-0162	INDEX RING - METRIC	
40	D441-0081	BARREL KEY TAILSTOCK	!
41	D697-0446	TAILSTOCK SCREW IMPERIAL	
42	D697-0445	TAILSTOCK SCREW METRIC	
43	D536-0332	NUT TAILSTOCK BRL IMPERIAL	
44	D536-0331	NUT TAILSTOCK BRL METRIC	
45*	A840-0049A	BARREL CLAMP SUB-ASSEMBLY	
46*	A806-0571A	KEEP SUB ASY TAILSTOCK SUB-ASSEMBLY	
47	D383-0083	HANDWHEEL TAILSTOCK	
48	D566-0120	PLUG TAILSTOCK HANDWHEEL	
49	FS-0130	M6 X 10 SOCKET HEAD CAP SCREW	
50	B325-0250	THRUST BEARING FAG 51405 25X6	1
53	UB-0008	8MM STEEL BALL	3

TAILSTOCK ASSEMBLY

A149-0708C & D



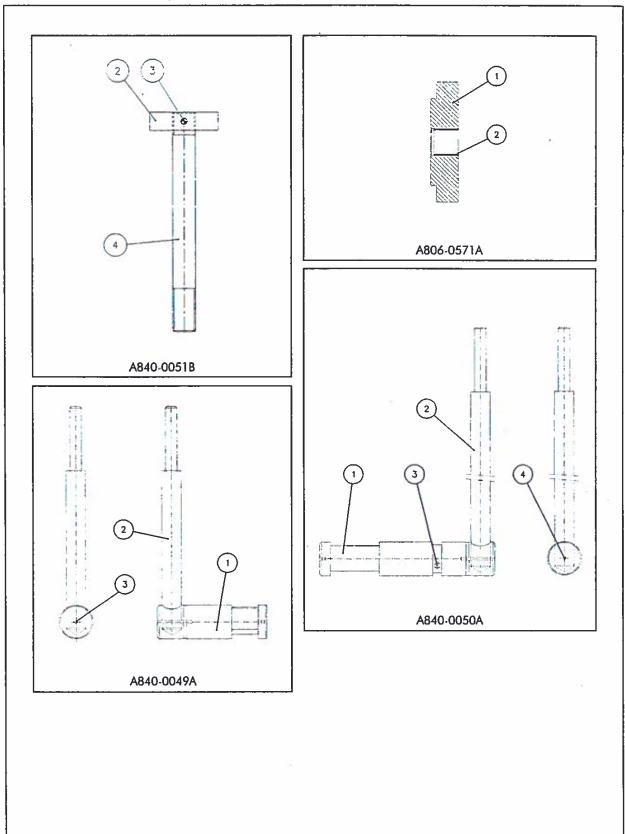
#### A149-0708C & D

## TAILSTOCK ASSEMBLY

Item No.	Pari Number	Description	Qty
54	B365-1154	SPRING FLEXO REF 113207	3
57 58 59 60 61 62	D388-0143 D560-0248 KA-0190 D560-0178 B337-2001 B365-6040	ROLLER HOUSING STD. PIN DOWEL T/STOCK 6.0 X 9.0 X 22MM WOODRUFF KEYS PIN ROLLER INA NEEDLE BRGS NK 5/10 ANDERTON DISC SPRING	4 4 1 4 4 24
65	B111-5167	SPIROL PIN 12 DIA X 40 MBK	4
67 68	B166Y0207 B116-2212	M12 X 130 LG HEXAGON HEAD BOLT WASHER DOUBLE COIL 3/4"	2 2
70	D827-0133	BODY	ı
73 74 75	D827-0070 D044-0054 D537-0896	BASE BARREL STAINLESS STEEL GRADUATION PLATE	] ] ]
80 81 82 83	D560-0302 FS-0382 FS-0195 FS-0790	PIN M12 X 35 DOG POINT SCREW M10 X 70 SOCKET HEAD CAP SCREW M8 X 10 DOG POINT NYLON SCREW	1 1 2 1

MASTIFF / JUN 2007

## TAILSTOCK SUB ASSEMBLIES



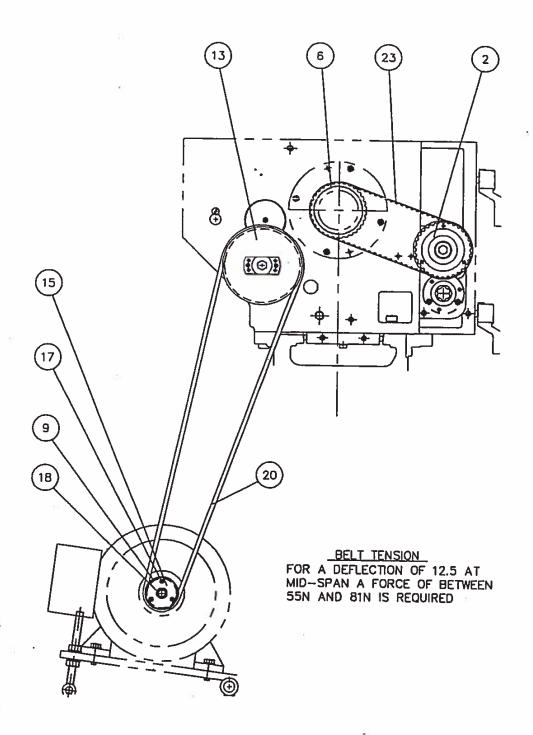
MASTIFF / JUN 2007

# SPARE PARTS

## TAILSTOCK SUB ASSEMBLIES

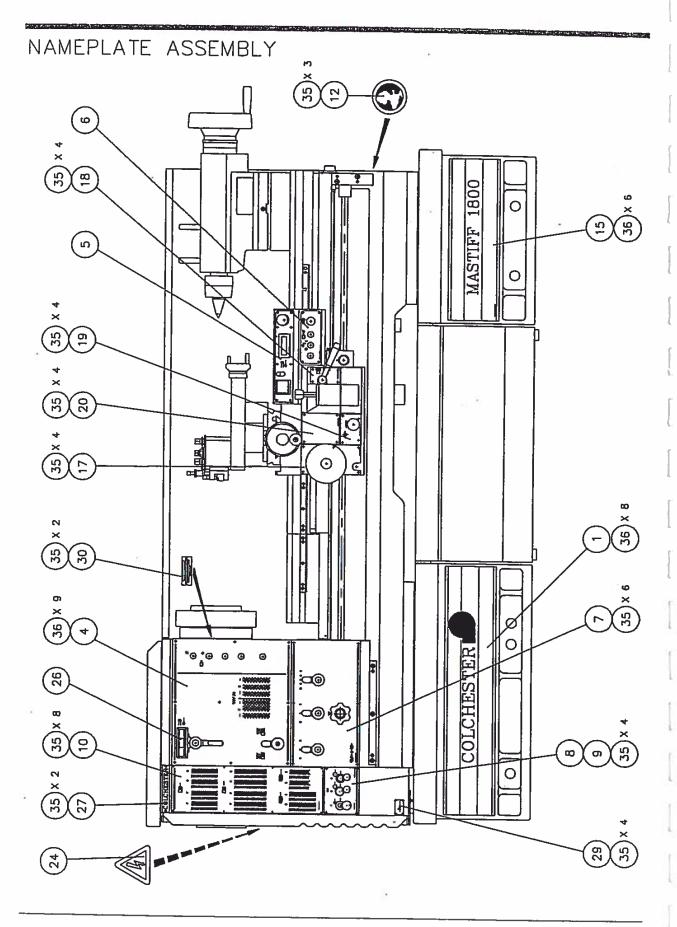
TAILSTOCK SUB ASSEMBLI			
Item No.	Part Number	Description	Qty
1 2	A806-0571A D442-0085 B311-1665	KEEP SUB ASSEMBLY KEEP GLACIER BUSH	1
1 2 3 4	A840-0050A D123-0118 D717-0118 B111Y6039 B111-5065	CLAMPING LEVER SUB ASSEMBLY ECCENTRIC STUD CLAMP LEVER DOWEL PIN 6 DIA X 16 SPIROL PIN 3 DIA X 30	] ] ]
2 3 4	A840-0051B D565-1056 B111-5099 D711-0202	CLAMP STUD SUB ASSEMBLY STUD PLATE SPIROL PIN 5 DIA X 35 STUD	1 1
1 2 3	A840-0047A D123-0117 D717-0104 B111-5065	BARREL CLAMP SUB ASSEMBLY ECCENTRIC STUD STEM SPIROL PIN 3 DIA X 30	1 1 1
		94	

# MASTIFF VS BELTS AND PULLEYS ASSEMBLY



Item No.	Description	Part No.
		Tarrio.
2	32T PULLEY SUB-ASSEMBLY	A824 - 0036A
6	32T PULLEY	D570 - 0352
13 14 15	172mm DIA. INPUT PULLEY MOTOR PULLEY MOTOR RETAINING PLATE	D570 - 0350 D570 - 0373 D565 - 1072
17 18	HEXAGON SOCKET BUTTON HEAD SCREW M6x16 HEXAGON SOCKET CAP HEAD SCREW M16x40	FS - 0296 FS - 0222
20	POLY VEE BELT REF 770L12	B345 - 5441
23	TIMING BELT REF 360H100	B346 - 1221
	32T PULLEY SUB-ASSEMBLY A824 - 0036A	
1 2 3	32T REVERSE BOX PULLEY BELT RETAINING PLATE HEXAGON SOCKET COUNTERSUNK SCREW M4 x 12	D570 - 0364 D565 - 1073 FS - 0428
		i i

	100		 					1
DCIN - 20607	MSC/MSH	Serial No.	Assembly	-	A107 - 0601B	Issue 5	02.01.96	



#### NAMEPLATE ASSEMBLY

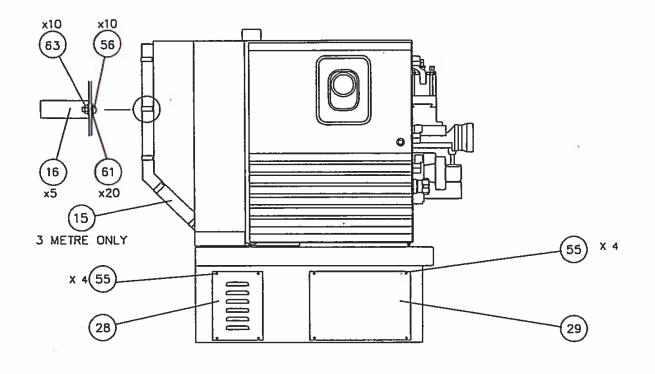
NAMEPLATE ASSEMBLY				
Description	Part No.			
'COLCHESTER' PLATE	D537 - 1095			
HEADSTOCK PUSH BUTTON AND REVERSE BOX PLATE UPPER APRON CONTROL PLATE LOWER APRON CONTROL PLATE	D537 - 1098 D537 - 1099 D537 - 1100			
GEARBOX PLATE METRIC CHANGE WHEEL PLATE IMPERIAL CHANGE WHEEL PLATE	D537 - 1101 D537 - 1102 D537 - 1103 D537 - 1104			
	D537 - 0783			
'MASTIFF 1800' PLATE	D537 - 1106			
APRON PLATE APRON HALF NUTPLATE APRON KNOCK-OFF APRON BLANK PLATE	D537 - 1108 D537 - 1111 D537 - 1112 D537 - 1113			
ELECTRICAL WARNING FLASH	D565Y0406			
SPEED RANGE PLATE SMALL 'COLCHESTER' PLATE RED ARROW LABEL '600 GROUP' LOGO PLATE CHUCK WARNING PLATE	D537 - 1110 D537 - 1057 D537 - 1039 D537 - 1071 D537 - 1082			
TAPTITE SCREW M3x5 HEXAGON SOCKET BUTTON HEAD SCREW M6x10	B123 - 6065 B163 - 1813			
	COLCHESTER' PLATE  HEADSTOCK PUSH BUTTON AND REVERSE BOX PLATE UPPER APRON CONTROL PLATE LOWER APRON CONTROL PLATE GEARBOX PLATE METRIC CHANGE WHEEL PLATE IMPERIAL CHANGE WHEEL PLATE THREAD AND FEED PLATE  'WORLD TURNS' PLATE  'MASTIFF 1800' PLATE  APRON PLATE APRON HALF NUTPLATE APRON BLANK PLATE  ELECTRICAL WARNING FLASH  SPEED RANGE PLATE SMALL 'COLCHESTER' PLATE RED ARROW LABEL '600 GROUP' LOGO PLATE CHUCK WARNING PLATE  TAPTITE SCREW M3x5			

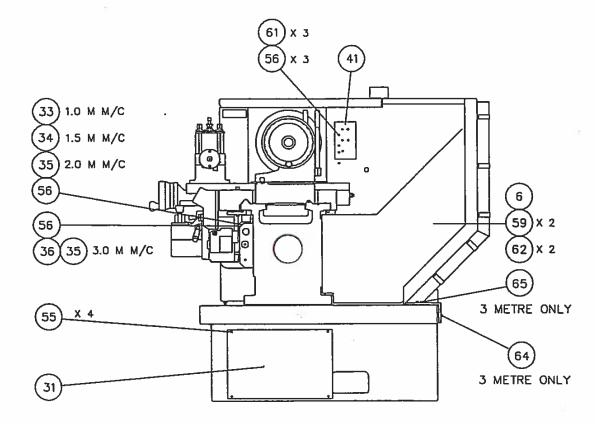
## SHEET METAL PACK (1) 1.0 M M/C Φ 1.5 M M/C 2.0 M M/C 3.0 M M/C EXTENSION 3.0 M M/C 0 0) (20 21) 3.0 M M/C 1.0 M M/C 1.5 M M/C х з $(55) \times 3 (56) \times 2$ (66) x 2 2.0 M M/C 59 3.0 M M/C HEADEND 3.0 M M/C TAILEND 56 33 56 8 8 35 **(** 56 36 1.0 M M/C 3 1.5 M M/C 2.0 M M/C 0 00 0 0 3.0 M M/Cx2

#### SHEET METAL PACK

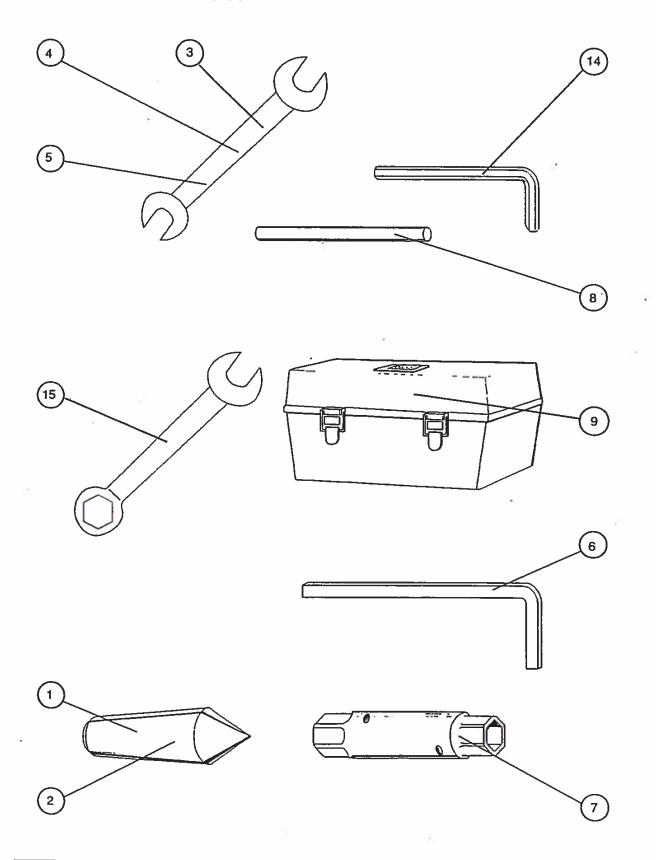
SHEET IVI	ETAL PACK		A137 - 0621
Item No.	Descr	iption	Part No.
1 2 3 4 5 6 7	SWARF BIN SWARF BIN SWARF BIN SPLASHGUARD SUPPORT BRAG	SWARF BIN 1.0 METRE MACHINE SWARF BIN 1.5 METRE MACHINE SWARF BIN 2.0 METRE MACHINE	
7 9 10 11 12 13 14 15	SPLASHGUARD SPLASHGUARD SPLASHGUARD (HEADEND)	1.0 METRE MACHINE 1.5 METRE MACHINE 2.0 METRE MACHINE 3.0 METRE MACHINE 3.0 METRE MACHINE	D565 - 1071 D346 - 0399 D346 - 0400 D346 - 0401 D346 - 0404 D346 - 0405 D050 - 0750 D718 - 0082 D050 - 0333
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	COOLANT TANK COVER	1.0 METRE MACHINE 1.5 METRE MACHINE 2.0 METRE MACHINE 3.0 METRE MACHINE 3.0 METRE EXTENSION  ER  1.0 METRE MACHINE 1.5 METRE MACHINE 2.0 AND 3.0 METRE MACHINES 3.0 METRE MACHINE	D828 - 0061 D828 - 0072 D565 - 0943 D132 - 0816 D132 - 0817 D132 - 0818 D132 - 0820 D132 - 0821 D132 - 0822 D132 - 0823 D132 - 0824 D132 - 0825 D132 - 0826 D132 - 0827 D132 - 0828 D132 - 0829
39 40 41 42	LEADSCREW COVER BRACKET GAP AREA COVER CHUCK GUARD MOUNTING PLA APRON DRAIN CHUTE		D050 - 0749 D132 - 0831 D565 - 1089 D147 - 0034
48 49 50	INFILL PLATE HEADSTOCK TRUNKING TRUNKING SUPPORT BRACKE	D565 - 1062 D132 - 0835 D050 - 0754	
55 56 57	HEXAGON SOCKET BUTTON H HEXAGON SOCKET PLATED BU HEXAGON SOCKET CAP HEAD	B163 - 1813 B163 - 1900 B163 - 0037	
59 61 62 63 64 65 66	HEXAGON SOCKET PLATED BU WASHER M6 WASHER M8 M6 NUT HEXAGON SOCKET SET SCREV HEXAGON HEAD SET SCREW HEXAGON SOCKET BUTTON H	W M10x25 M12	B163 - 1905 B117 - 0048 B117 - 0034 B147 - 9152 B163 - 1588 B166 - 0218 B163 - 1804

# SHEET METAL PACK (2)





# STANDARD TOOL KIT



Item No.	Description	Part No.
1 2 3 4 5 6 7 8 9	HARD CENTRE No. 5 MORSE TAPER HARD CENTRE No. 6 MORSE TAPER O/E SPANNER 17 x 19 mm A/F O/E SPANNER 22 x 24 mm A/F O/E SPANNER 27 x 30 mm A/F L' CAMLOCK KEY BOX SPANNER 24 x 27 AF TOMMY BAR 3/8"x6" PLASTIC TOOLBOX	B916 - 2085 B916 - 2086 B982 - 0030 B982 - 0034 B982 - 0037 D441 - 0053 B981 - 1559 B981 - 1804 R647 - 0120
14 15	SET HEXAGON (ALLEN) KEYS 2mm-10mm 13mm COMBINATION SPANNER	A894 - 0004 B981 - 2850
	SET HEXAGON (ALLEN) KEYS 2mm-10mm	A894 - 0004
8	ALLEN KEY 3/8" A/F	B981 - 1112
12 13 14 15 16 17 18 19	ALLEN KEY ALLEN	B982 - 0002 B982 - 0003 B982 - 0004 B982 - 0006 B982 - 0007 B982 - 0008 B982 - 0009

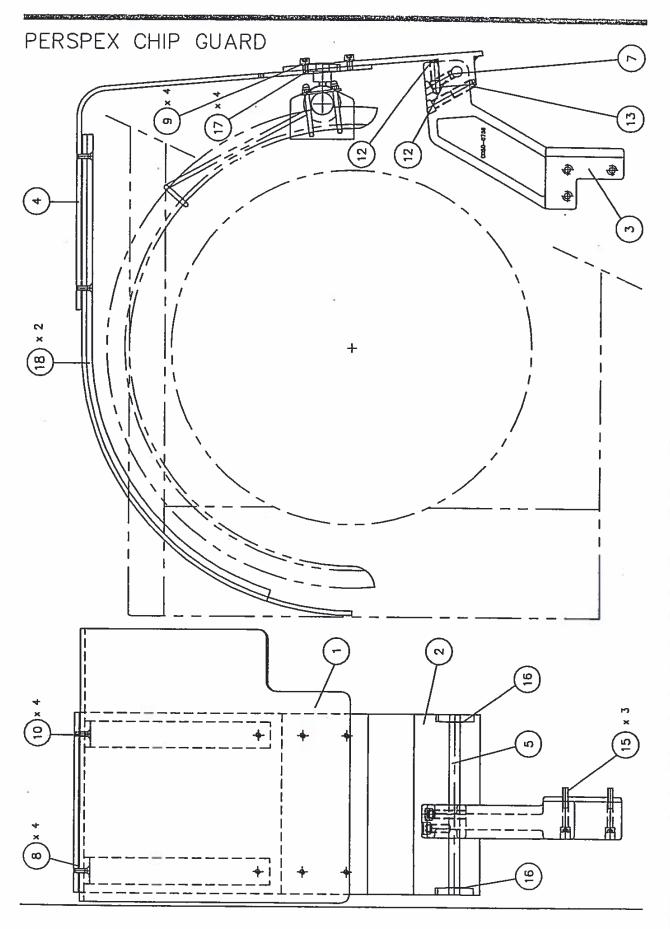
#### **MASTIFF ACCESSORIES**

## INDEX

#### ITEM

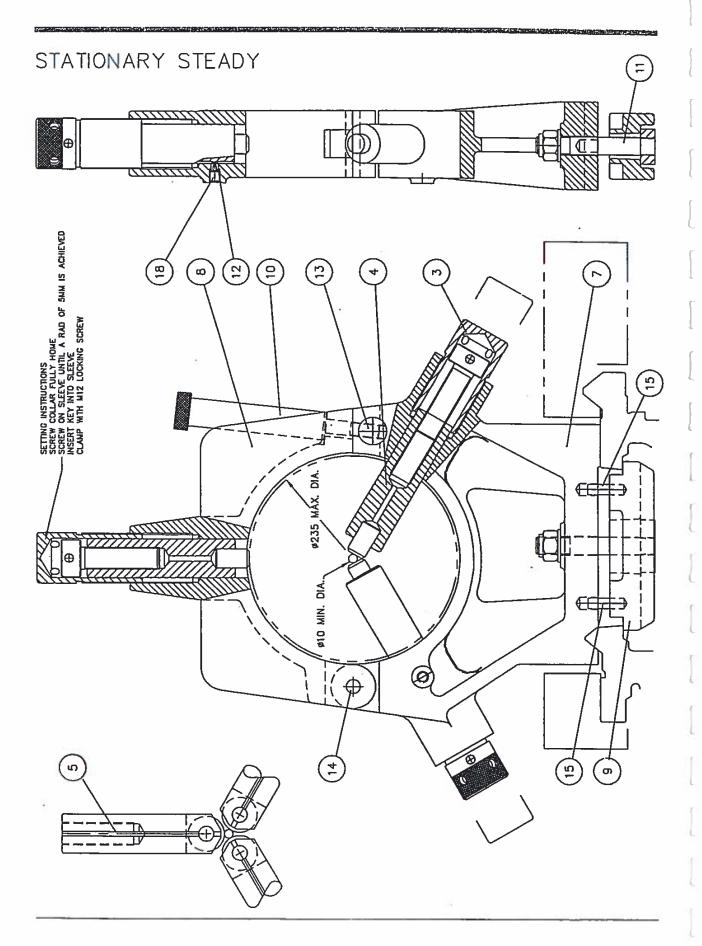
- Quick Change Toolpost
   4 Way Toolpost
- 3. Perspex Chipguard
- 4. Stationary Steady
  Large Capacity Stationary Steady
- 5. Travelling Steady
- 6. Rear Toolpost and Base

1	<u> </u>	1127
Item No.	Description	Part No.
1 2 3	TYPE T4 FOUR WAY TURRET TOOLPOST COMPLETE TEE NUTS FOR SLOTTED TOPSLIDE HEXAGON SOCKET CAP HEAD SCREW 3/8"UNCx11/2" LONG	B935 - 1139 B935 - 1438 B143 - 7069



Page A3-i

LIIOI LA	CHIP GUARD ASSEMBLY	A137 - 0622
Item No.	Description	Part No.
1 2 3 4 5	PERSPEX CHIP GUARD LOWER SUPPORT BRACKET UPPER SUPPORT SHAFT	D346 - 0403 D718 - 0080 D050 - 0759 D718 - 0081 D699 - 0820
7 8 9 10	PLUG FIBRE WASHER 1/4" IDx1/2" OD WASHER M6 HEXAGON SOCKET COUNTER SUNK SCREW M5x16	D566 - 0203 B411 - 0006 B117 - 0009 B163 - 1016
12 13	W/POINT SET SCREW M10x25 HEXAGON SOCKET DOG POINT SET SCREW M10x30	B163 - 1588 B163 - 1766
15 16 17 18	HEXAGON SOCKET CAP HEAD SCREW M6x45 CIRCLIP 1400-12 HEXAGON SOCKET CAP HEAD SCREW M6x12 SUPPORT BAR	B163 - 0043 B363 - 0012 B163 - 0036 D041 - 0251

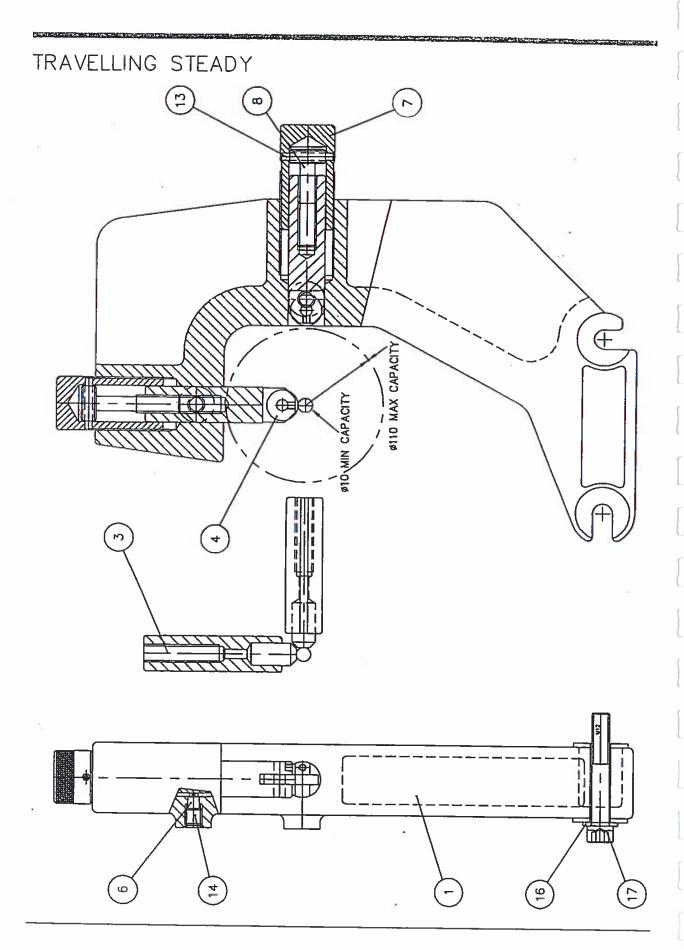


Item No.	Description	Part No.	
3 4 5 7 8 9 10 11 12 13 14 15 18 19 20	COLLAR SUB-ASSEMBLY PAD TYPE FINGER SUB-ASSEMBLY ROLLER TYPE FINGER SUB-ASSEMBLY STEADY BASE STEADY TOP CLAMP PLATE CLAMP SCREW CLAMP STUD ASSEMBLY KEY PIN HINGE PIN SPIROL PIN 12x40  DOG POINT SCREW M12x12 WASHER M20 NYLOC NUT M20		A820 - 0006 A882 - 0068A A882 - 0068B D722 - 0067 D131 - 0043 D697 - 0388 A840 - 0053 D441 - 0082 D560 - 0321 D560 - 0322 B111 - 5167 B163 - 1780 B117 - 0014 B147 - 9010
1 2 4	COLLAR SUB-ASSEMBLY  COLLAR ADJUSTING SCREW  STEEL DOWEL 10x55	A820 - 0006	D133 - 0256 D697 - 0389 B111 - 6117
1 2	PAD TYPE FINGER SUB-ASSEMBLY PAD FINGER PAD	A882 - 0068A	D300 - 0036 D421 - 0022
4 5 6 7 8	ROLLER TYPE FINGER SUB-ASSEMBLY  ROLLER FINGER BEARING INA NATR 17PP PIN CONCAVE LUBRICATOR 6mm DIA. HEXAGON SOCKET SET SCREW M4x8	A882 - 0068B	D300 - 0037 B337 - 1711 D560 - 0323 B454 - 2004 B163 - 1511
1 2 3	CLAMP STUD ASSEMBLY STUD STUD PLATE SPIROL PIN 5x36	A840 - 0053	D711 - 0206 D565 - 1056 B111 - 5099

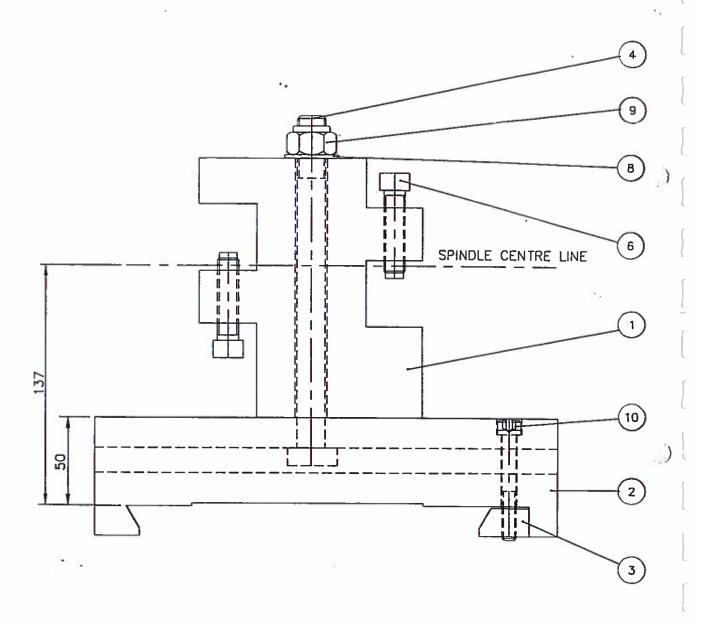
# LARGE CAPACITY STATIONARY STEADY SETTING INSTRUCTIONS PISEIMIN CAPACITY 9380 MAX CAPACITY (A)

## LARGE CAPACITY STATIONARY STEADY

Item No.	Description	Part No.		
	V			
3	COLLAR SUB-ASSEMBLY		A820 - 0006	
5	ROLLER TYPE FINGER SUB-ASSEMBLY		A882 - 0068B	
7 8 9 10 11 12 13 14	STEADY BASE STEADY TOP CLAMP PLATE CLAMP SCREW CLAMP STUD ASSEMBLY KEY PIN HINGE PIN SPIROL PIN 12x40		D722 - 0070 D722 - 0069 D131 - 0043 D697 - 0388 A840 - 0053 D441 - 0082 D560 - 0321 D560 - 0322 B111 - 5167	
18 19 20	DOG POINT SCREW M12x12 WASHER M20 NYLOC NUT M20		B163 - 1780 B117 - 0014 B147 - 9010	
	COLLAR SUB-ASSEMBLY	A820 - 0006		
1 2	COLLAR ADJUSTING SCREW		D133 - 0256 D697 - 0389	
4	STEEL DOWEL 10x55		B111 - 6117	
	ROLLER TYPE FINGER SUB-ASSEMBLY	A882 - 0068B		
4 5 6 7 8	ROLLER FINGER BEARING INA NATR 17PP PIN CONCAVE LUBRICATOR 6mm DIA. HEXAGON SOCKET SET SCREW M4x8	3	D300 - 0037 B337 - 1711 D560 - 0323 B454 - 2004 B163 - 1511	
4	CLAMP STUD ASSEMBLY STUD	A840 - 0053	D711 - 0206	
3	STUD PLATE SPIROL PIN 5x36		D565 - 1056 B111 - 5099	



RAVELLI	NG STEADY	A178 - 0713
Item No.	Description	Part No.
1	TRAVELLING STEADY CASTING	D722 - 0072
3 4	PAD TYPE FINGER SUB -ASSEMBLY ROLLER TYPE FINGERSUB -ASSEMBLY	A882 - 0069A A882 - 0069B
6 7 8	KEY COLLAR SCREW	D441 - 0082 D133 - 0257 D697 - 0390
13 14	SPIROL PIN 5x36 DOG POINT SCREW M12x12	B111 - 5099 B163 - 1780
16 17	WASHER M12 HEXAGON SOCKET CAP HEAD SCREW M12x80	B117 - 0012 B163Y0094
1	PAD TYPE FINGER SUB-ASSEMBLY A882 - 0069A PLAIN FINGER	D300 - 0038
2	PAD	D421 - 0023
	ROLLER TYPE FINGER SUB-ASSEMBLY A882 - 0069B	7 10 10 10 10
5 6	ROLLER FINGER PIN	D300 - 0039 D560 - 0324
9 10	BEARING FAG 6082Z HEXAGON SOCKET CUP POINT SET SCREW M5x5	B315 - 0208 B163 - 1547



#### REAR TOOLPOST ASSEMBLY

A182 - 0712

HEAR IC	A182 - 0/12	
Item No.	Description	Part No.
1 2 3 4	REAR TOOLPOST BODY BASE PLATE GIB STRIP TEE BOLT	D831 - 0065 D565 - 1086 D345 - 0094 D048 - 0168
6	SQUARE HEAD SET SCREW M12x50	B170 - 0005
8 9 10	WASHER M16 NYLOC NUT M16 HEXAGON SOCKET CAP HEAD SCREW M8x60	B117 - 0013 B147Y9027 B163Y0061
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#### **NOTES**

Customer Service, Parts and Sales, call 800-575-2843

info@harrisonlathe.com



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