

Model# RK-7532-P3
Zero Gravity Pantograph
QuickRiveting® Tool



Operations Manual



Your Authorized Distributor:

**Industrial
Rivet &
Fastener Co.**



CONTENTS

Safety		Page 3
Specifications		Page 3
Preparing the tool for service		Page 4
Air supply		Page 4
Maintenance		
Daily		Page 5
Weekly		Page 5
Tail jaw cylinder		Page 6
Hydraulic body		Page 6
Intensifier		Page 7
Pilot valve		Page 7
Assembly Drawings & Components		Page 8
Handle, Trigger & Nose		Pages 9-11
Intensifier		Pages 12-13
Linear Arm		Page 14
Rotation Device		Page 15
Troubleshooting		Page 16
Warranty		Page 17
MSDS		Page 18-23



SAFETY

- ➡ Do NOT USE EQUIPMENT WITH THIS TOOL THAT IS NOT RECOMMENDED OR SUPPLIED BY INDUSTRIAL RIVET & FASTENER Co.
- ➡ ALWAYS DISCONNECT THE AIR SUPPLY BEFORE ATTEMPTING ANY MAINTENANCE OR ADJUSTMENT/FITTING OF NOSE EQUIPMENT
- ➡ Do NOT OPERATE A TOOL THAT IS DIRECTED TOWARDS ANY PERSON(S)
- ➡ ALL MODIFICATIONS CARRIED OUT ON THE TOOL WITHOUT THE CONSENT OF INDUSTRIAL RIVET & FASTENER Co. SHALL BE DONE SO AT THE CUSTOMERS' SOLE RESPONSIBILITY
- ➡ REFER TO THIS MANUAL BEFORE ATTEMPTING ANY MAINTENANCE OPERATION
- ➡ AVOID EXCESSIVE CONTACT WITH HYDRAULIC OIL (Velocite No 10), AS SOON AS POSSIBLE WASH HANDS THOROUGHLY
- ➡ Do NOT EXCEED 7 BAR / 100 PSI INLET PRESSURE, THE USE OF A PRESSURE REGULATOR IS HIGHLY RECOMMENDED
- ➡ INSPECT THE MANDREL REGULARLY. WHILE SOME MARKING THROUGH USE IS NORMAL EXCESSIVE PITTING AND DISTORTION MAY CAUSE A MANDREL TO FAIL. A MANDREL THAT FAILS MAY FORCIBLY EJECT FROM THE TOOL. MANDRELS SHOULD BE INSPECTED BEFORE THE RECOMMENDED NUMBER OF PLACINGS BASED UPON THE BROACH LOAD OF THE PARTICULAR APPLICATION. IF YOU ARE UNSURE OF THE BROACH LOAD CONTACT YOUR INDUSTRIAL RIVET & FASTENER Co. REPRESENTATIVE WHO WILL HELP YOU DETERMINE WHAT THIS IS AND THE SAFE NUMBER OF PLACINGS TO EXPECT FROM THE MANDREL

SPECIFICATIONS

The specifications and information contained in this manual are applicable only to the tool with which it was supplied. Industrial Rivet & Fastener Co reserve the right to make any changes without notice as part of Industrial Rivet & Fastener Co policy of continuous improvement.

SPECIFICATIONS FOR RK-753™ RIVET TOOL

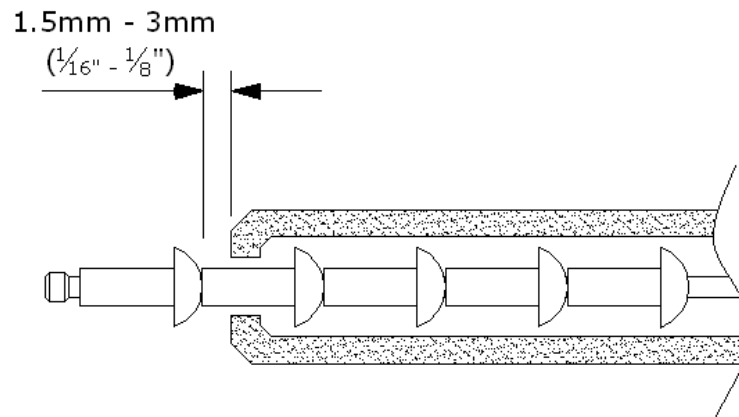
Air Pressure	Min/Max	□ 5 – 7 bar	□ 70 – 100 psi
Free Air Volume Required	@5.1 bar/75psi	□ 2.6 liters	□ .09 ft ³
Stroke	Minimum	□ 30 mm	□
Pull Force	@5.5 bar/80psi	□ 3.89kN	□
Cycle Time	Approximately	□ 1-1.5 seconds	□
Noise Level	Less than	□ 70 dB(A)	□
Weight		□ 1.2kg	□ 2.64 lb
Vibration	Less Than	□ 2.5 m/s ²	□ 8 ft/s ²

SPECIFICATIONS FOR RK-753™ INTENSIFIER / BOOSTER

Air Pressure	Min/Max	□ 5 – 7 bar	□ 70 – 100 psi
Intensification Ratio		□ 30 : 1	□

PREPARING THE TOOL FOR SERVICE

1. Check to see if a cursor is present in the barrel, fit a cursor into the barrel (1) if not present ensuring that the spring loaded plunger of the cursor is towards the front of the barrel
2. Fit correct nose assembly for the rivet being placed
3. Connect the hydraulic hose assembly from the tool to the intensifier
4. Connect the trigger/tail jaw supply line into the quick release collet on the pilot valve bolted to the intensifier
5. Connect the main air supply to the rear of the intensifier
6. Open the tail jaws (24) by switching off the air supply through the trigger/tail jaw assembly (38)
7. Load rivets onto mandrel by inserting the mandrel through the tail of the rivets and remove the paper strips
8. Place follower spring onto the mandrel
9. Open front jaw assembly and insert loaded mandrel through the nose assembly until a gap of approximately 1.5mm (1/16") - 3mm (1/8") between the head of the first rivet and the nose assembly is achieved



10. Close tail jaws (24) to grip the mandrel, the tool is now loaded and ready for use

AIR SUPPLY

- The rivet tool is powered by compressed air at an optimum pressure of 5.5 bar (80 psi)
- The use of a pressure regulator filter/lubricator unit within 3 meters of the tool is highly recommended to extend the life of the tool.

Dirt and/or water in the air supply can seriously impact the performance and durability of the tool; damage to the tool caused by contaminated air supply is not covered under warranty

MAINTENANCE

In order to maintain the tool in a safe working order it is important to carry out regular maintenance as prescribed by the manufacturer. A thorough inspection replacement of all seals within the tool should be carried out after 500,000 placings or annually, whichever is the sooner. Item numbers in parentheses refer to assembly drawing part numbers

Daily

- Check for air leaks, pay particular attention to the elbow connectors (21) supplying the tail jaws. Any damaged hoses should be replaced
- Lubricate the tool by pouring a few drops of light lubricating oil into the air inlet on the intensifier
- Inspect all mandrels for signs of wear or damage. Discard any mandrels that display signs of excessive pitting or distortion
- Remove front jaw nose assembly and inspect for cracks or other damage
- Inspect and clean the cursor assembly, lubricate with light oil and replace with the spring loaded end of the cursor toward the threaded end of the barrel. If the cursor is inserted the wrong way round, the tool will not feed rivets. Carry out the following steps to reorient the cursor
 - Loosen screws (35) and remove end cover (20)
 - Remove screw (18) seals (19) and cover (17) note there are two seals one either side of the cover
 - Remove circlip (15) rear plug (16) turret assembly (22) with jaws (24) spring (23) and jaw housing (25)
 - Insert a mandrel through the barrel nut (13) holding onto the bulb end and feed the mandrel up and through the barrel. The mandrel will pull the cursor out of the barrel to be inserted correctly.

Weekly

- Carry out procedures as per daily maintenance instructions above
- Clean and inspect the tail jaws for signs of damage or wear (groove running through the jaw serrations). Follow the instructions above to re-orient the cursor to access the tail jaws in the tail jaw cylinder. Reassemble the tail jaws with a light coating of grease on the outer face that contacts the jaw housing. Do not allow grease to contaminate the grooved inner face of the jaws as mandrel slippage may result.
- Check the oil level in the reservoir, the oil should be approximately ½" below the plexiglass cover plate fitted to the intensifier. If the tool requires topping up with oil on a regular basis check for leaking seals or damaged hoses and couplings

MAINTENANCE

Follow the instructions below to perform annual service and replacement of seals, item numbers in parentheses refer to assembly drawing part numbers on page 8.

Tail Jaw Cylinder

- Disconnect tool from air supply
- Disconnect rivet tool and hose assembly from intensifier
- Loosen screws (35) and remove end cover (20)
- Remove handle covers by removing (31,32) by removing retaining screws (33, 34)
- Disconnect tail jaw supply tube from elbow connector or using a small flat screwdriver remove the elbow connector complete taking care to retain the seals
- Remove screw (18) seals (19) and cover (17) note there are two seals one either side of the cover
- Remove circlip (15) rear plug (16) turret assembly (22) with jaws (24) spring (23) and jaw housing (25). Inspect all parts for signs of wear or damage and replace if necessary
- Using an 18mm A/F open ended wrench on the flats machined onto the barrel (1) and a 13mm A/F socket wrench, remove the barrel plug (13)
- Carefully slide tail jaw cylinder (10) with return spring (11) off the barrel. Clean and inspect tail jaw cylinder and spring for signs of wear/damage
- Replace all O ring seals and lubricate with a light coating of grease including the jaws as described in the weekly maintenance instructions
- Reassemble in reverse order

Hydraulic Body

- Carry out instructions above to dismantle the tail jaw cylinder
- Disconnect trigger supply line to the trigger assembly (38). Loosen screw securing the trigger assembly in position on the barrel and slide toward the front end of the barrel and set aside
- Remove the bleed plug assembly and seal (5, 6) a small amount of hydraulic fluid will run out of the tool and care should be taken to avoid excessive contact with skin and should be disposed of safely
- Unscrew the hydraulic hose and set aside over a suitable container to catch any fluid that may leak out
- Grip stroke limiter (9) in a vise across the flats machined and using a 32mm A/F wrench unscrew hydraulic body (8) from stroke limiter and remove piston (28)
- Pry out seals (2, 7) taking care not to damage internal bore of hydraulic body
- Clean all parts and check for signs of wear/damage, replace all seals lubricating with a light coating of grease and reassemble in reverse order.
- **Tip:** When inserting the barrel through the hydraulic piston and stroke limiter assembly place the tail jaw cylinder against the back of the piston (28) in order to help keep the dynamic seal in the correct orientation. If this is not done the seal can become dislodged and the tool will leak requiring another strip down!

MAINTENANCE

Follow the instructions below to perform annual service and replacement of seals, item numbers in parentheses refer to assembly drawing part numbers on page 9.

Intensifier Unit

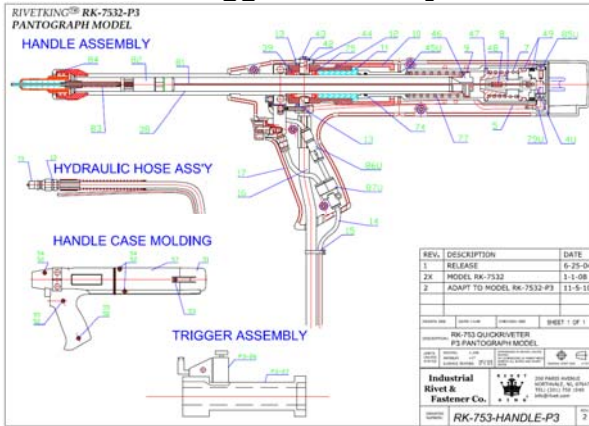
- Disconnect tool from air supply
- Disconnect rivet tool and hose assembly from intensifier
- Remove hydraulic coupler (1) and seals (2) holding unit over a suitable container to collect the hydraulic fluid
- Remove screw (18) together with cover plate (17), spacer (19) plate (16) and silencer (30)
- Using a flat bladed screwdriver pry out and remove spiral retaining ring (15)
- Screw item 18 back into end cap (20) and pull out the end cap (20), cylinder liner (10) and piston assembly (22).
- Using an intensifier spanner/wrench as detailed on page 10, unscrew and remove the seal plug (23)
- Carefully remove all seals (24, 28, 28), spacers (25, 29) and seal housing (27)
- Remove cover plate (7) and gasket (6) by removing the four retaining screws (32) and washers (33)
- Using the other end of the intensifier spanner/wrench remove the valve assembly (5)
- Clean and inspect all parts for signs of wear or damage
- Replace all O ring seals
- Reassemble in reverse order lubricating all seals with a light coating of grease

Pilot valve

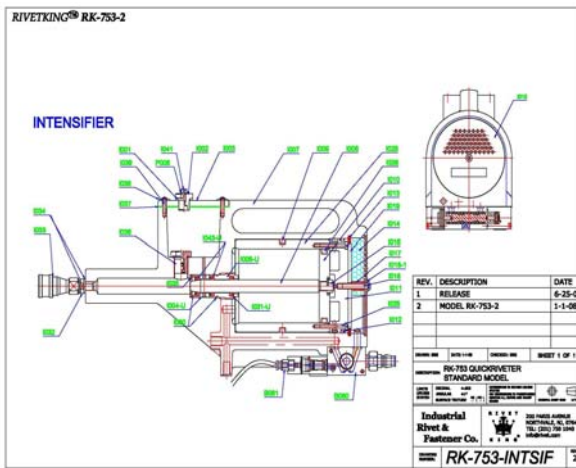
- Disconnect tool from air supply
- Remove pilot valve from base of intensifier by removing three retaining screws being careful to retain sealing rings
- Unscrew and remove end caps
- Remove pistons and valve spool, O rings & spacers, clean all items and check for damage
- Reassemble pistons with a light coating of grease.
- Lightly coat the spool with a small amount of light oil, wipe with a clean rag and replace into valve assembly
- If necessary; replace all o rings available as a service kit part number RK101-00010
- Reassemble in reverse order

General Assembly & Components of RK7532

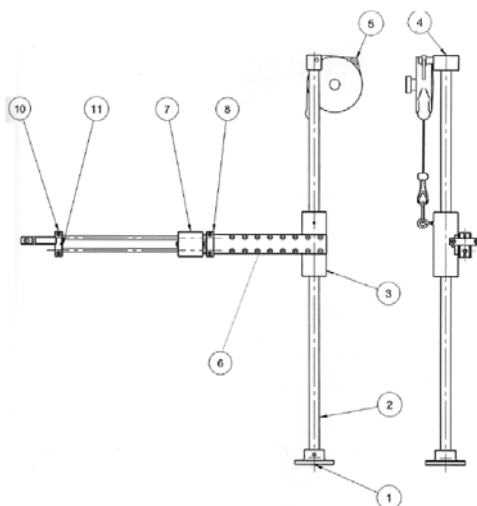
1) Handle and Trigger Assembly



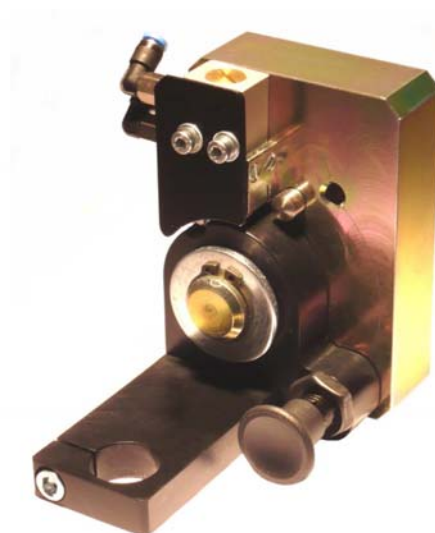
2) Intensifier Assembly



3) Linear Arm Assembly



4) Rotation Device Assembly

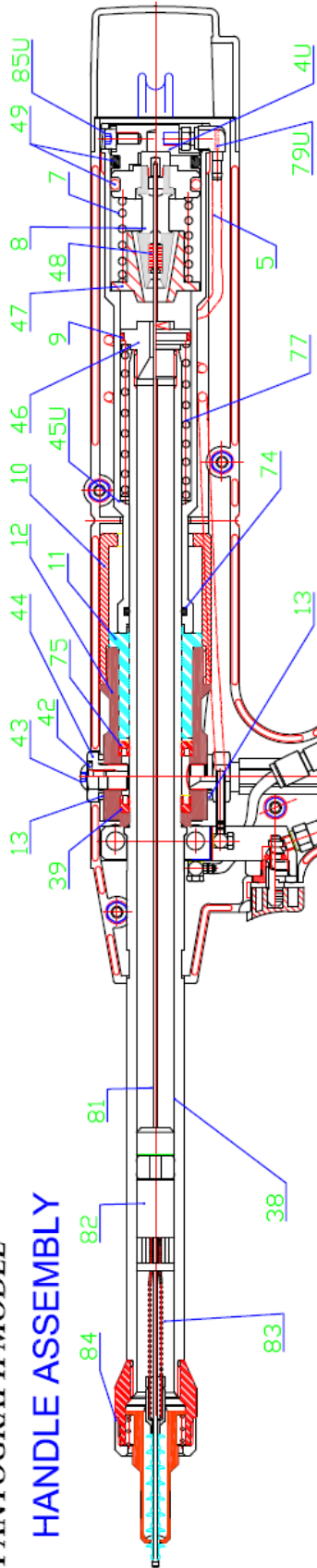




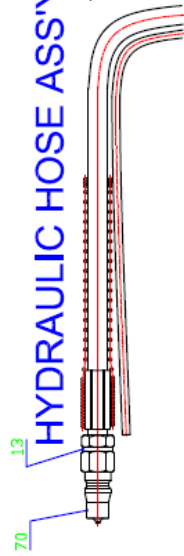
RK7532-P3 Pantograph Handle/Hose Assembly

RIVETKING™ RK-7532-P3
PANTOGRAPH MODEL

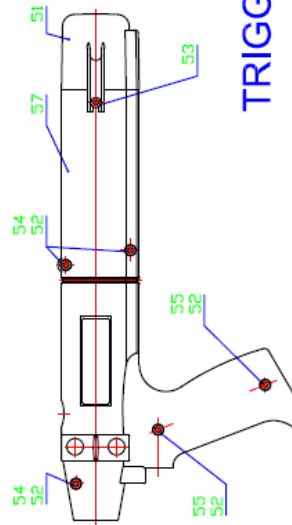
HANDLE ASSEMBLY



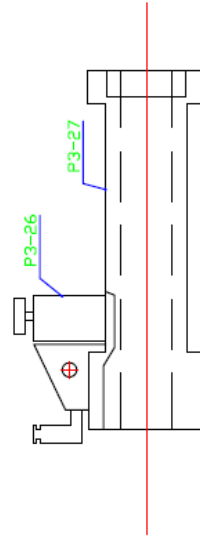
HYDRAULIC HOSE ASS'Y



HANDLE CASE MOLDING



TRIGGER ASSEMBLY



REV.	DESCRIPTION	DATE
1	RELEASE	6-25-04
2X	MODEL RK-7532	1-1-08
2	ADAPT TO MODEL RK-7532-P3	11-5-10

DRAWING SRS	DATE: 11-08	CHECKED: SRS	SHEET 1 OF 1
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DESCRIPTION:
RK-753 QUICKRIVETER
P3 PANTOGRAPH MODEL

LIMITS DIMENSIONS STATED	DECIMAL # .005	FRACTIONS IN INCHES UNLESS OTHERWISE NOTED	ORIGINAL SHEET SIZE: 11"X17"
ANGULAR SURFACE TEXTURE	4:1	SEE DIMENSIONS ON PART/DETAILS FOR ALL DIMENSIONS AND SHARP EDGES	

**Industrial
Rivet &
Fastener Co.**

**R I V E T
K I N G**

200 PARIS AVENUE
NORTHVALE, NJ, 07647
TEL: (201) 750-1040
Info@rivet.com

DRAWING NUMBER:	RK-753-HANDLE-P3	REV:	2
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RK7532-P3 Pantograph Handle/Hose Assembly

Parts List			
#	Part#	Description	Qty
4	TP-RK7532-H004UY	REAR PLUGE	1
5	TP-RK7532-H005Y	TAIL JAW TUBE	1
6	NOT INCLUDED	NOT INCLUDED	
7	TP-RK7532-H007Y	SPRING	1
8	TP-RK7532-H008Y	TAIL JAW PISTON ASS'Y	1
8	TP-RK7532-H008-1	TAIL JAW PISTON	1
8	TP-RK7532-H008-2	TURRET PLUG	1
9	TP-RK7532-H009N	RUBBING STRIP	1
10	TP-RK7532-H010N	STROKE LIMITER	1
11	TP-RK7532-H011Y	PISTON	1
12	TP-RK7532-H012N	BODY	1
13	TP-RK7532-H013Y	SEAL	3
14	TP-RK7532-H014Y	4MM AIR HOSE(2500MM)	1
15	TP-RK7532-H015Y	CABLE TIES (4"BLACK)	9
16	TP-RK7532-H016Y	HYDRAULIC HOSE ASS'Y	1
17	TP-RK7532-H017N	HANDLE MOULDING(RIGHT)	1
18	TP-RK7532-H018UN	VALVE AND TRIGGER ASS'Y	1
20	TP-RK7532-H020N	TRIGGER HOUSING	1
25	TP-RK7532-H025-1N	"O"RING (SEE KIT# TP-RK7532-H120U)	1
26	TP-RK7532-P3-26	PISTOL GRIP VALVE ASSEMBLY	1
27	TP-RK7532-P3-27	DELTRIN PISTOL GRIP HANDLE	1
28	TP-RK7532-H028N	SCREW	1
29	TP-RK7532-H029N	"O"RING	1
30	TP-RK7532-H030N	SEAL RETAINER	1
38	TP-RK7532-H038Y	BARREL	1
39	TP-RK7532-H039Y	SEAL	1
40	TP-RK7532-H040Y	BLEED PLUGE ASSEMBLY	1
41	TP-RK7532-H041Y	SEAL	1
42	TP-RK7532-H042Y	SEAL	1
43	TP-RK7532-H043N	SCREW	1
44	TP-RK7532-H044N	PLUG	1
45U	TP-RK7532-H045UN	TAL JAW CYLILDER	1
46	TP-RK7532-H046N	PLUGE	1



RK7532-P3 Pantograph Handle/Hose Assembly cont....

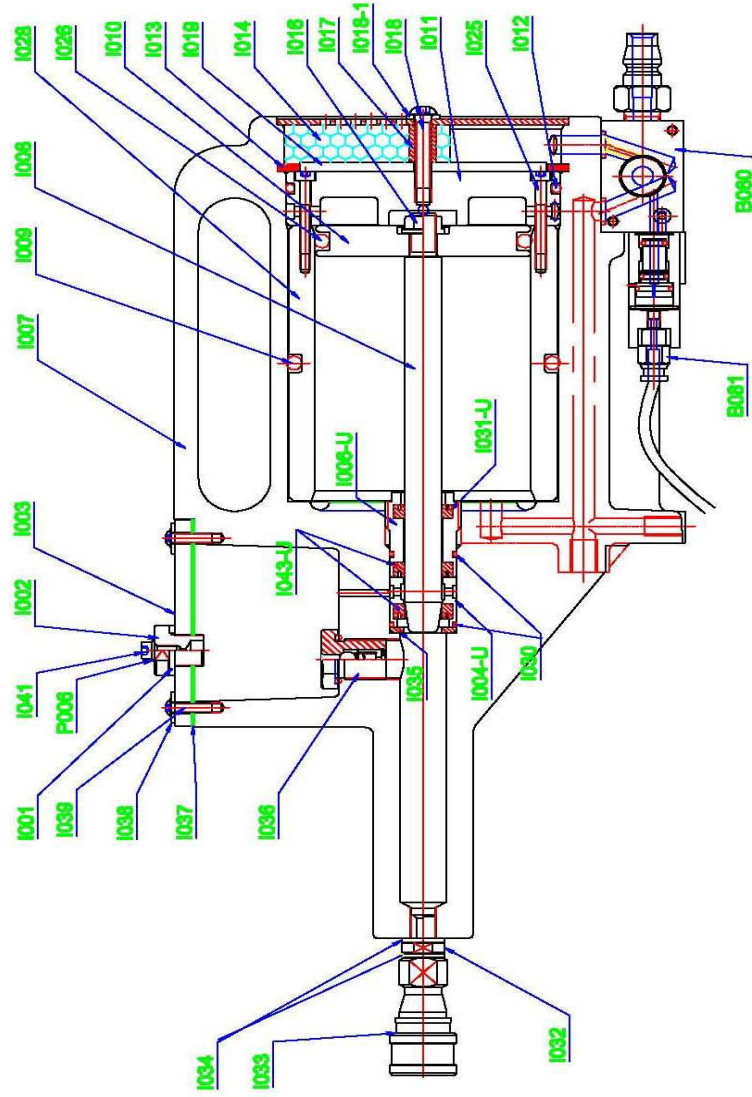
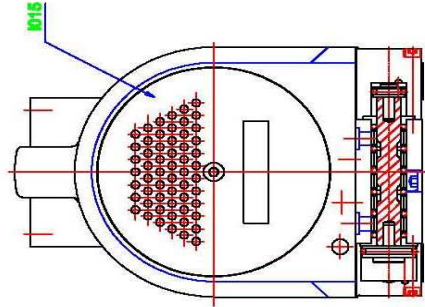
Parts List cont....			
#	Part#	Description	Qty
47	TP-RK7532-H047Y	JAW HOUSING	1
48	ZRT-VJ	TAIL JAWS	2
49	TP-RK7532-H049Y	"O"RING	2
50U	TP-RK7532-H050UY	SCREW	2
51	TP-RK7532-H051N	END CAP	1
52	TP-RK7532-H052Y	NUT	7
53	TP-RK7532-H053N	SCREW	2
54	TP-RK7532-H054Y	SCREW	3
55	TP-RK7532-H055Y	SCREW	2
56	TP-RK7532-H056Y	LABEL	2
57	TP-RK7532-H057N	HANDLE MOULDING(LEFT)	1
70	TP-RK7532-H070N	QUICK RELEASE NIPPLE	1
74	TP-RK7532-H074N	"O"RING	1
75	TP-RK7532-H075Y	SEAL	1
77	TP-RK7532-H077Y	BARREL RETURN SPRING	1
78	TP-RK7532-H078Y	SPINDLE	1
78	TP-RK7532-H078N	SPINDLE	1
79U	TP-RK7532-H079UY	ELBOW CONNECTOR	1
81	See Catalog	MANDREL	1
82	ZRT-IC	CURSOR	1
83	See Catalog	M/F SPRING	1
84	See Catalog	FRONT JAW (SEE CATALOG FOR P/N)	1
85U	TP-RK7532-H085UY	SCREW	2
86U	TP-RK7532-H086UY	NON-RETURN VALVE	1
87U	TP-RK7532-H087UY	Y-FITTING	1
120U	TP-RK7532-H120U	TRIGGER ASS'Y KIY, 26, 78, 25, 25-1, 24, 22	1




RK7532 Standard Intensifier Assembly

RIVETKING™ RK-753-2

INTENSIFIER



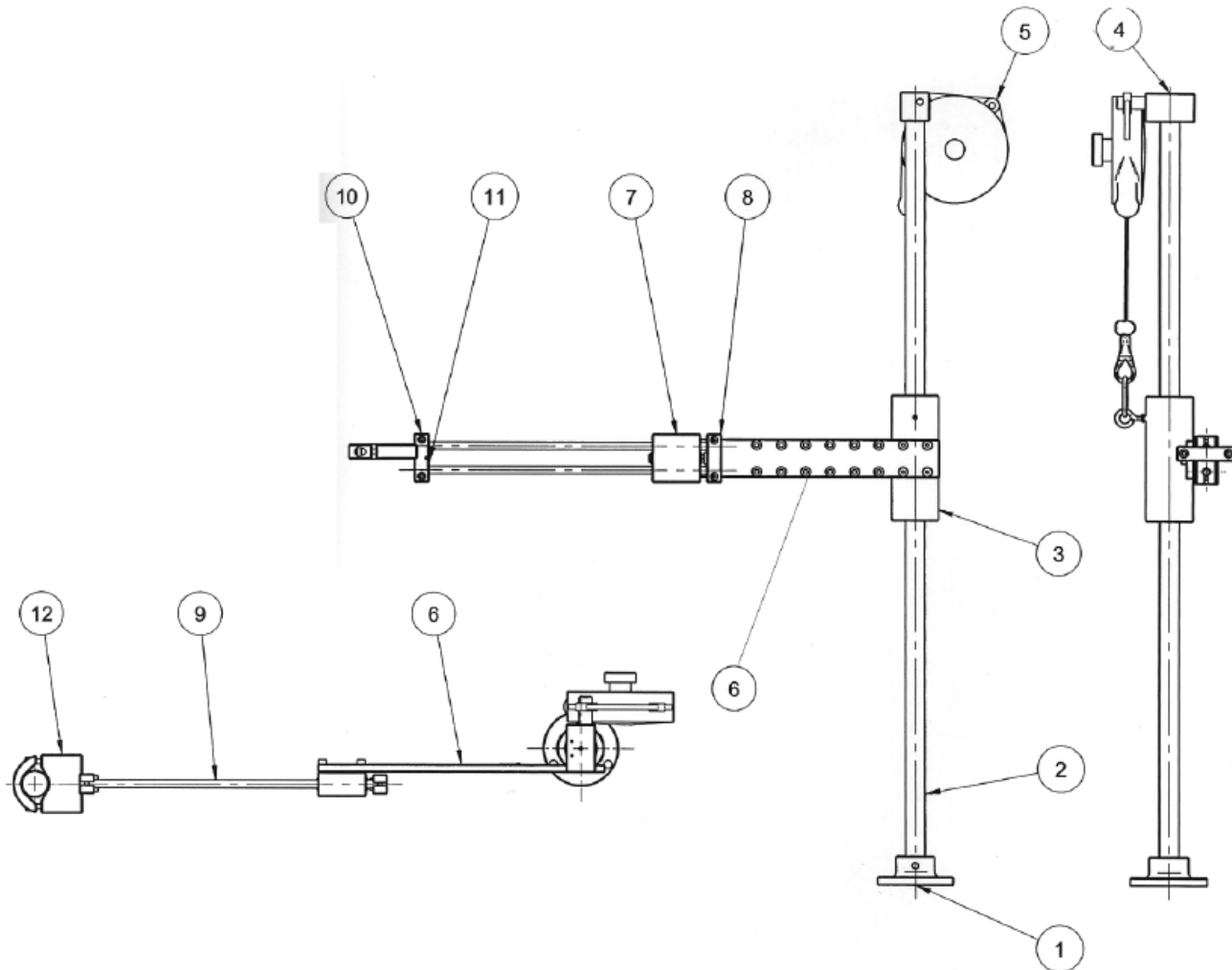
REV.	DESCRIPTION	DATE
1	RELEASE	6-25-04
2	MODEL RK-753-2	1-1-08
DRAWN: BBS DATE: 1-1-08 CHECKED: BBS SHEET 1 OF 1		
DESCRIPTION: RK-753 QUICKRIVETER STANDARD MODEL		
UNITS: UNLESS STATED:	DECIMAL FRACTION: SURFACE TEXTURE: (1/16) (R)	CONVERSION TO INCHES: UNLESS NOTED OTHERWISE IS IN MILLIMETERS UNLESS ALL DIMS AND DIMS ORIGINAL SHEET BBS 11/07
Industrial Rivet & Fastener Co. 		RIVET KING 200 PARTS AVENUE NORTHVALE, NJ, 07647 TEL: (201) 750 1040 info@rivet.com
DRAWING NUMBER:	RK-753-INTSIF	
REV:	2	



General Assembly RK7532 Standard Intensifier Assembly

Parts List			
#	Part#	Description	Qty
I001	TP-RK7532-B001N	"O"RING (SEE KIT#TP-RK7532-K082)	1
I002	TP-RK7532-B002N	SCREW (SEE KIT#TP-RK7532-K082)	1
I003	TP-RK7532-B003N	COVER PLATE (SEE KIT#TP-RK7532-K082)	1
I004-U	TP-RK7532-B004UY	SEAL HOUSING	1
I005-U	RP-RK7532-B005UY	SEAL	2
I006-U	TP-RK7532-B006UY	PLUG	1
I007	TP-RK7532-B007Y	BODY ASS'Y	1
I008	TP-RK7532-B008N	PISTON ROD	1
I009	TP-RK7532-B009Y	"O"RING	1
I010	TP-RK7532-B010N	AIR PISTON	1
I011	TP-RK7532-B011N	END COVER	1
I012	TP-RK7532-B012Y	"O"RING	1
I013	TP-RK7532-B013Y	RETAINING RING	1
I014	TP-RK7532-B014Y	SILENCER	1
I015	TP-RK7532-B015Y	SILENCER COVER	1
I016	TP-RK7532-B016N	LOCK NUT	1
I017	TP-RK7532-B017Y	SPACER	1
I018	TP-RK7532-B018N	SCREW	1
I018-1	TP-RK7532-B018-1N	WASHER	1
I019	TP-RK7532-B019Y	RETAINING PLATE	1
I020	TP-RK7532-BN	"O"RING	1
I025	TP-RK7532-B025Y	SCREW	2
I026	TP-RK7532-B026Y	"O"RING	1
I028	TP-RK7532-B028Y	SLEEVE	1
I029	TP-RK7532-B028Y	SEAL	1
I030	TP-RK7532-B030N	"O"RING	2
I031U	TP-RK7532-B031UN	SEAL	1

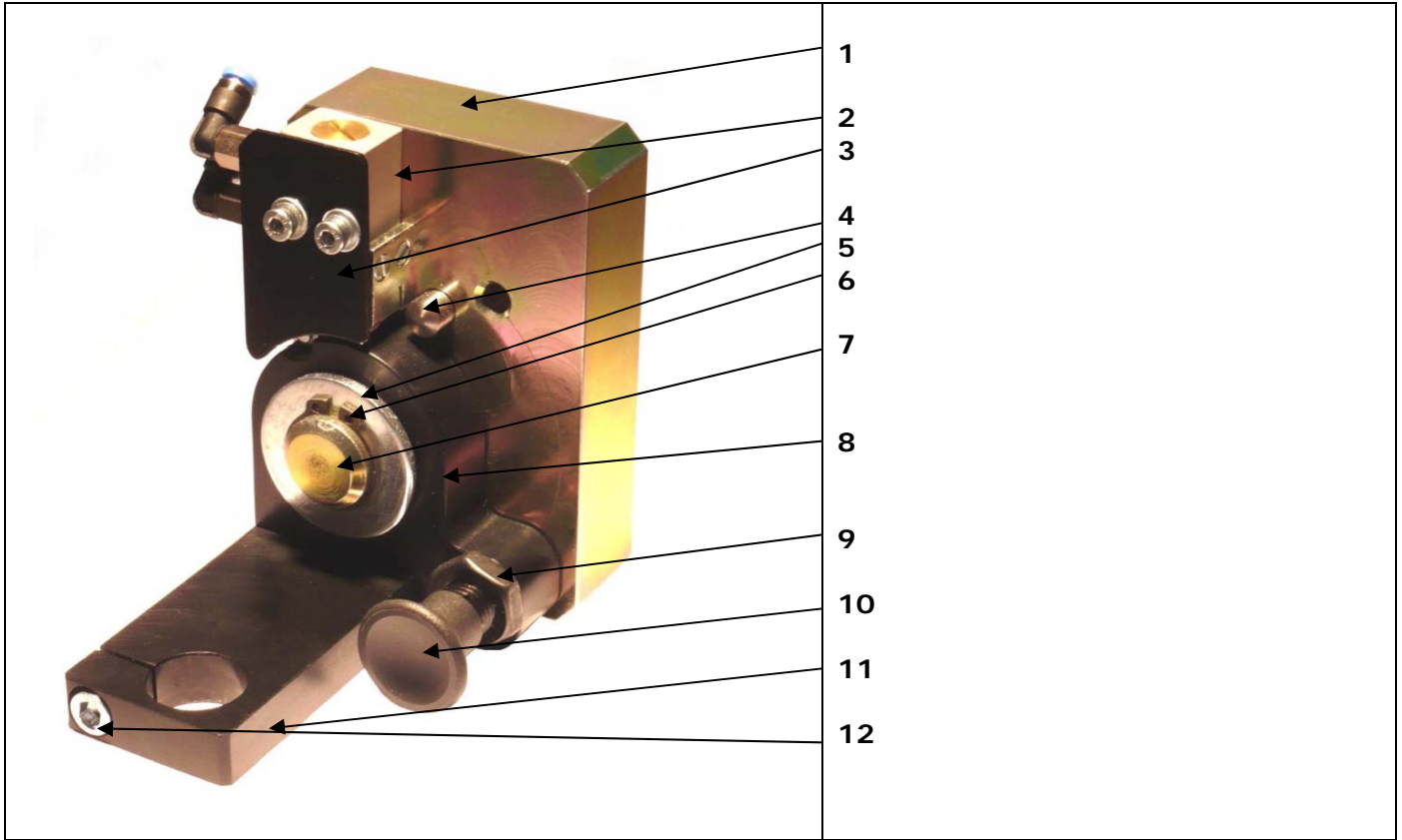
RK7532-P3 Linear Arm Assembly



Parts List			
#	Part#	Description	Qty
1	TP-RK7532-P001	FOOT	1
2	TP-RK7532-P002	POLE	1
3	TP-RK7532-P003	NEEDLE BUSH	1
4	TP-RK7532-P004	BALANCER SUPPORT	1
5	RP-RK7532-P005	BALANCER, 2.5kg-5.0kg ZERO GRAVITY	1
6	TP-RK7532-P006	SETTING PLATE	1
7	TP-RK7532-P007	SLIDING BUSH	1
8	TP-RK7532-P008	CLAMP	1
9	TP-RK7532-P009	SET OF SLIDES	2
10	TP-RK7532-P010	CLAMP	1
11	TP-RK7532-P011	MAGNET	1
12	TP-RK7532-P012	INLINE CLAMP	1



RK7532-P3 Rotation Device Assembly

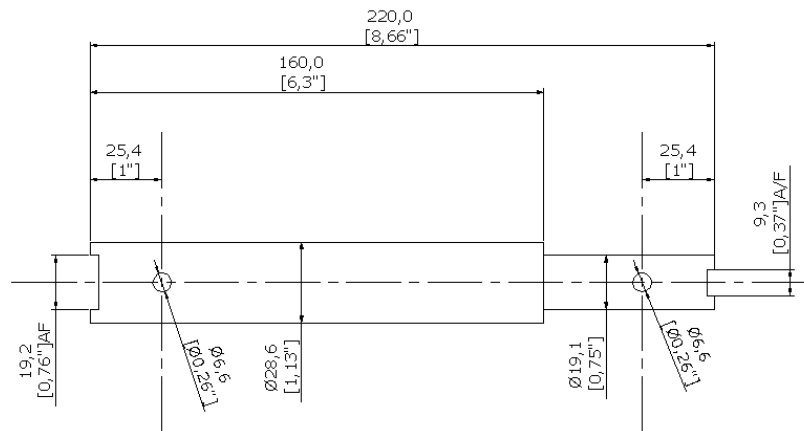


Parts List			
#	Part#	Description	Qty
1	TP-RK7532-R001	ARM MOUNT	1
2	TP-RK7532-R002	FEST VALVE 10748 WITH SMC #AS1200M5 SPEED CONTROL	1
3	TP-RK7532-R003*	COVER PLATE & SCREWS *NOT INCL. WITH SOME VERSIONS	1
4	TP-RK7532-R004	DOWEL	1
5	RP-RK7532-R005	WASHER	1
6	TP-RK7532-R006	RETAINING RING	1
7	TP-RK7532-R007	CLEVIS PIN	1
8	TP-RK7532-R008	PIVOT BLOCK	1
9	TP-RK7532-R009	LOCK NUT	1
10	TP-RK7532-R010	PULL BUTTON	1
11	TP-RK7532-R011	TOOL MOUNT	1
12	TP-RK7532-R012	SCREW	1

TROUBLESHOOTING

Problem	Possible Cause	Remedy
Tool will not cycle when connected to air supply	<ul style="list-style-type: none"> Low air pressure Pilot valve sticking 	<ul style="list-style-type: none"> Check air pressure and increase if necessary Remove pilot valve spool, clean and lubricate as detailed on page 7
Tool will not place fastener	<ul style="list-style-type: none"> High broach load Worn/dirty tail jaws Low air pressure Jaws not gripping mandrel Air in hydraulic system 	<ul style="list-style-type: none"> Check hole size, fastener and grip length to ensure correct fastener is being used in the application. Check for correct mandrel Clean/replace tail jaws Check air pressure and increase if necessary Mandrel worn or broken, replace with a new mandrel Re-prime tool
Tool feeds more than one rivet	<ul style="list-style-type: none"> Incorrect gap set between head of rivet and nose jaw Worn/dirty tail jaws Worn mandrel 	<ul style="list-style-type: none"> Re-set gap as to 1.5-3mm Clean/replace tail jaws Check/replace mandrel
Mandrel will not release Mandrel Releases too slow	<ul style="list-style-type: none"> Inadequate SMC Speed Control Adjustment Festo Roller Lever Valve R-002 is out of position Faulty Fest Roller Lever Valve 	<ul style="list-style-type: none"> Adjust SMC speed Valve on Fest Valve R002 (Increase flow) Adjust position using two screws. Check Festo Valve Position & Operation, Replace if necessary
Mandrel falling out on tool rotation	<ul style="list-style-type: none"> Inadequate SMC Speed Control Adjustment 	<ul style="list-style-type: none"> Adjust SMC speed Valve on Fest Valve R002 (Decrease flow)

INTENSIFIER SPANNER



Industrial Rivet & Fasteners Co. offers a comprehensive tool service and repair program, for details contact your local area sales representative or call direct:



200 Paris Avenue
Northvale, NJ 07647
Tel: (201) 750-1040
Fax: (201) 750-1219



Warranty Statement:

Industrial Rivet & Fastener Co. Inc. (hereinafter "IRF"), hereby warrants to the initial retail customer or original authorized distributor ("Warrantee") only that its products will be free from defects in material and workmanship for a period of 1 year from the purchase date provided that the products are used in accordance with "IRF's" instructions as to maintenance, operation and use.

The said warranty does not extend to goods subjected to misuse, neglect, accidental/improper installation, improper maintenance or which have been altered/repared by anyone other than the seller or its certifiably authorized agents. The said warranty does not extend to consumable components or wear components as listed in schedule A.

The warrantee's only remedy and IRF's only obligation in the event of a defect or failure in the products, is that IRF, at its sole option, repair, replace or re work the products, but in no case shall the cost of the foregoing exceed the invoice price of the products.

This warranty shall be void if any person seeking to make a claim for defective products fails to notify IRF within 30 days, or, if distributor fails to provide evidence that the product failed within 30 days of the failure. Proof and date of purchase, maintenance records as well as details regarding failure must be sent via e-mail, and a sample of the failed products sent via postal service is required for warranty evaluation.

This warranty is in lieu of all other warranties, expressed or implied, including merchantability, or fitness provided for herein. Under no circumstance shall IRF be liable for incidental or consequential damages arising from the defect or failure in its products.

Seller's sole obligation under the foregoing warranty will be limited to, at Seller's option, repair or replacement of the tool (and shipping to the buyer with transportation charges paid to any place within the contiguous 48 states). Returned goods will be evaluated by our warranty repair department and a conclusion will be determined and classified as:

- a) Warranty Repair (free of charge)
- b) Non-Warranty repair or Abuse/Neglect (Hourly rate, Schedule B)
- c) Maintenance (Flat Fee, Schedule B)

Schedule A – Limited Warranty

The following are considered consumable or wear parts and are not covered under the warranty.

Consumables: Jaws, Nosepieces, Mandrels, Cursor, Spring

Wear Parts: Mandrel Catcher, O-Rings, Pneumatic Seals, Hydraulic Seals*

*Hydraulic seals have a limited warranty (6 months) and the replacement is at the sole discretion of the manufacturer.

Schedule B – Maintenance/Repair

Price Schedule as of 1/1/2011

Bench Fee: \$ 60.00 (up to one hour)

Hourly Rate: \$ 60.00 per hour

Flat Fee: Level 1 - Adjustments, cleaning and light repair \$45.00 + parts

Level 2 - Maintenance, Oil Change (Velocite No 10), plus Level 1 service \$65.00 + parts

Level 3 - Complete disassembly, change all seals, plus level 2 service \$120.00 + parts

If inspection by the seller of returned goods shows no breach of the forgoing warranty, Seller's regular conditioning charges (Schedule B) apply. Upon this conclusion we will either repair the tool at no cost to you and return it postage paid, or call you to inform you of the repair cost. The repair will need to be approved in writing before any work is performed.

A comprehensive tool service and repair program, for details contact your local area sales representative or call:
Industrial Rivet & Fastener Co.

200 Paris Ave
Northvale, NJ 07647
1-800-BUY-RIVET

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist

before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction

and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be

consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is a static accumulator.

STORAGE

Do not store in open or unlabeled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols

can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications,

handling practices, concentration and ventilation. Information on the selection of protective equipment for use

with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of

Product Name: MOBIL VELOCITE OIL NO. 10

Revision Date: 01Nov2006

Page 4 of 8

respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode.

Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove

manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged

gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid

Color: Amber

Odor: Characteristic

Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.861

Flash Point [Method]: >174C (345F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

Autoignition Temperature: N/D

Boiling Point / Range: > 316C (600F)

Vapor Density (Air = 1): > 2 at 101 kPa

Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 C

Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5

Solubility in Water: Negligible

Viscosity: 22 cSt (22 mm²/sec) at 40 C | 4 cSt (4 mm²/sec) at 100C

Product Name: MOBIL VELOCITE OIL NO. 10

Revision Date: 01Nov2006

Page 5 of 8

Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: N/D

Melting Point: N/A

Pour Point: -21°C (-6°F)

DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure Conclusion / Remarks

Inhalation

Toxicity (Rat): LC50 > 5000 mg/m³ Minimally Toxic. Based on test data for structurally similar materials.

Irritation: No end point data. Negligible hazard at ambient/normal handling temperatures.

Based on assessment of the components.

Ingestion

Toxicity (Rat): LD50 > 2000 mg/kg Minimally Toxic. Based on test data for structurally similar materials.

Skin

Toxicity (Rabbit): LD50 > 2000 mg/kg Minimally Toxic. Based on test data for structurally similar materials.

Irritation (Rabbit): Data available. Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.

Eye

Irritation (Rabbit): Data available. May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified

Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung nonspecific

infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

Additional information is available by request.

Product Name: MOBIL VELOCITE OIL NO. 10

Revision Date: 01Nov2006

Page 6 of 8

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC 3 = IARC 1 5 = IARC 2B

2 = NTP SUS 4 = IARC 2A 6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land.

Expected to

partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may

reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable

laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised

incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It

does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning PRECAUTIONARY LABEL TEXT: Empty containers may retain residue and can be

dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH

CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY

MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult

to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum

Product Name: MOBIL VELOCITE OIL NO. 10

Revision Date: 01Nov2006

Page 7 of 8

reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with

governmental regulations.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT) : Not Regulated for Land Transport

LAND (TDG) : Not Regulated for Land Transport

SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA) : Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified

as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification

requirements of the SARA 313 Toxic Release Program.

The Following Ingredients are Cited on the Lists Below:*

Chemical Name CAS Number List Citations

DIPHENYLAMINE 122-39-4 5, 9

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL 6 = TSCA 5a2 11 = CA P65 REPRO 16 = MN RTK

2 = ACGIH A1 7 = TSCA 5e 12 = CA RTK 17 = NJ RTK

3 = ACGIH A2 8 = TSCA 6 13 = IL RTK 18 = PA RTK

4 = OSHA Z 9 = TSCA 12b 14 = LA RTK 19 = RI RTK

5 = TSCA 4 10 = CA P65 CARC 15 = MI 293

Code key: CARC=Carcinogen; REPRO=Reproductive

* EPA recently added new chemical substances to its TSCA Section 4 test rules. Please contact the supplier to confirm

whether the ingredients in this product currently appear on a TSCA 4 or TSCA 12b list.

SECTION 16 OTHER INFORMATION

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

No revision information is available.

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