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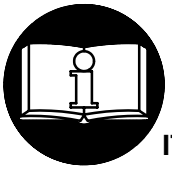
OPERATION AND MAINTENANCE MANUAL FOR SERIES 1702SB1 AND 1702P1 HEAVY DUTY IMPACTOOLS

NOTICE

Model 1702SB1 and 1702P1 Impactools are designed for production applications and for maintenance applications involving repair shops for light equipment such as lawn mowers and garden tractors.
Ingersoll–Rand is not responsible for customer modification of tools for applications on which Ingersoll–Rand was not consulted.



⚠ WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED.
READ THIS MANUAL BEFORE OPERATING TOOL.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1)
- For safety, top performance, and maximum durability of parts, operate this tool at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet with 5/16" (8 mm) inside diameter air supply hose.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905–1 for a typical piping arrangement.
- Always use clean, dry air at 90 psig (6.2 bar/620 kPa) maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Note the position of the reversing lever before operating the tool so as to be aware of the direction of rotation when operating the throttle.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.
- Tool shaft may continue to rotate briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by Ingersoll–Rand.
- Use only impact sockets and accessories. Do not use hand (chrome) sockets or accessories.
- Impact wrenches are not torque wrenches. Connections requiring specific torque must be checked with a torque meter after fitting with an impact wrench.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

NOTICE

The use of other than genuine Ingersoll–Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.
Repairs should be made only by authorized trained personnel. Consult your nearest Ingersoll–Rand Authorized Servicenter.

Refer All Communications to the Nearest Ingersoll–Rand Office or Distributor.

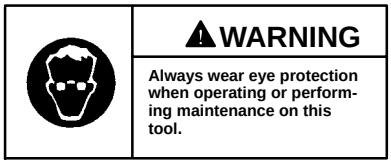
Printed in U.S.A.

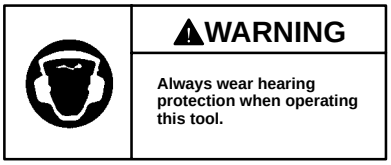
INGERSOLL-RAND®
PROFESSIONAL TOOLS

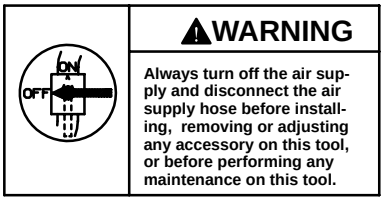
WARNING LABEL IDENTIFICATION

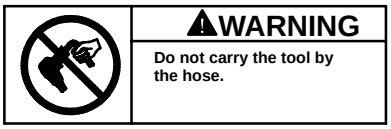
⚠ WARNING

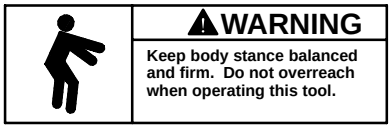
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

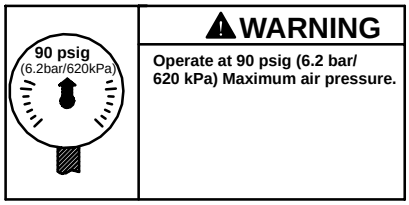












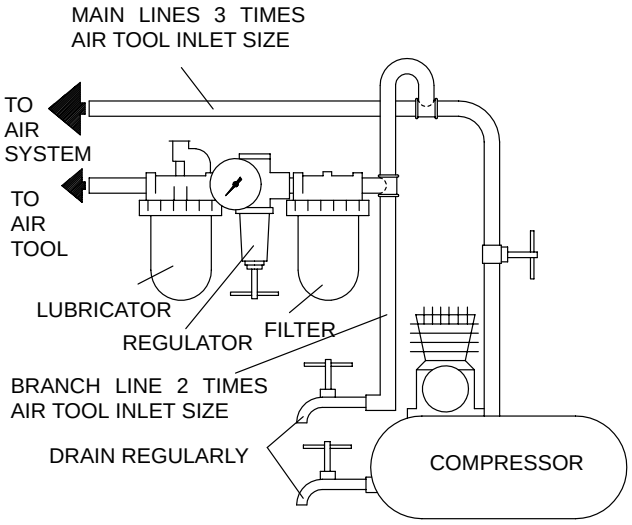
PLACING TOOL IN SERVICE

LUBRICATION

Ingersoll–Rand No. 50 **Ingersoll–Rand No. 100**

Always use an air line lubricator with these tools.
We recommend the following Filter–Lubricator–Regulator Unit:

USA – No. C22–04–G00



(Dwg. TPD905–1)

HOW TO ORDER AN IMPACTOOL

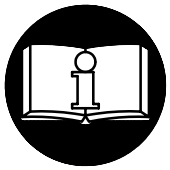
INLINE GRIP with 3/8" SQUARE DRIVE			
		Recommended Torque Range	
Model	**Impacts/min.**	**ft–lb**	**Nm**
1702SB1	1,500	13 – 85	18 – 115
PISTOL GRIP with 3/8" SQUARE DRIVE			
1702P1	1,500	15 – 100	21 – 136

F

MANUEL D'EXPLOITATION ET D'ENTRETIEN DES CLÉS A CHOCS SÉRIE FORTE MODÈLES 1702SB1 ET 1702P1

NOTE

Les clés à chocs Modèles 1702SB1 et 1702P1 sont destinées aux applications de production et aux applications d'entretien dans les ateliers de réparation de petites machines telles que les tondeuses et les tracteurs de jardin.
Ingersoll–Rand ne pt être tenu responsable de la modification des outils par le client pour les adapter à des applications qui n'ont pas été approuvées par Ingersoll–Rand.



⚠ ATTENTION

D'IMPORTANTES INFORMATIONS DE SECURITÉ SONT JOINTES.
LIRE CE MANUEL AVANT D'UTILISER L'OUTIL.
L'EMPLOYR EST TENU DE COMMUNIQUER LES INFORMATIONS DE CE MANUEL AUX EMPLOYÉS UTILISANT CET OUTIL.
LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PT CAUSER DES BLESSURES.

MISE EN SERVICE DE L'OUTIL

- **Toujours exploiter, inspecter et entretenir cet outil conformément au Code de sécurité des outils pnmatiques portatifs de l'American National Standards Institute (ANSI B186.1).**
- **Pour la sécurité, les performances optimales et la durabilité maximale des pièces, cet outil doit être connecté à une alimentation d'air comprimé de 6,2 bar (620 kPa) maximum à l'entrée, avec un flexible de 8 mm de diamètre intérir.**
- **Couper toujours l'alimentation d'air comprimé et débrancher le flexible d'alimentation avant d'installer, déposer ou ajuster tout accessoire sur cet outil, ou d'entreprendre une opération d'entretien quelconque sur l'outil.**
- **Ne pas utiliser des flexibles ou des raccords endommagés, effilochés ou détériorés.**
- **S'assurer que tous les flexibles et les raccords sont correctement dimensionnés et bien serrés. Voir Plan TPD905–1 pour un exemple type d'agencement des tuyauteries.**
- **Utiliser toujours de l'air sec et propre à une pression maximum de 6,2 bar (620 kPa). La poussière, les fumées corrosives et/ou une humidité excessive pvent endommager le motr d'un outil pnmatique.**
- **Ne jamais lubrifier les outils avec des liquides inflammables ou volatiles tels que le kérosène, le gasol ou le carburant d'aviation.**
- **Ne retirer aucune étiquette. Remplacer toute étiquette endommagée.**

UTILISATION DE L'OUTIL

- **Porter toujours des lunettes de protection pendant l'utilisation et l'entretien de cet outil.**
- **Porter toujours une protection acoustique pendant l'utilisation de cet outil.**
- **Tenir les mains, les vêtements flous et les chevx longs, éloignés de l'extrémité rotative de l'outil.**
- **Noter la position du levier d'inversion avant de mettre l'outil en marche de manière à savoir dans quel sens il va tourner lorsque la commande est actionnée.**
- **Prévoir, et ne pas oublier, que tout outil motorisé est susceptible d'à–coups brusques lors de sa mise en marche et pendant son utilisation.**
- **Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil. Des couples de réaction élevés pvent se produire à, ou en dessous, de la pression d'air recommandée.**
- **La rotation des accessoires de l'outil pt continuer pendant un certain temps après le relâchement de la gâchette.**
- **Les outils pnmatiques pvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables pvent causer des doulrs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de doulrs. Consulter un médecin avant de recommencer à utiliser l'outil.**
- **Utiliser les accessoires recommandés par Ingersoll-Rand.**
- **N'utiliser que les douilles et les accessoires pour clés à chocs. Ne pas utiliser les douilles et accessoires (chromés) de clés manuelles.**
- **Les clés à chocs ne sont pas des appareils dynamométriques. Les connexions nécessitant un couple de serrage spécifique doivent être vérifiées avec un mesurr de couple après avoir été assemblées avec une clé à chocs.**
- **Cet outil n'est pas conçu pour fonctionner dans des atmosphères explosives.**
- **Cet outil n'est pas isolé contre les chocs électriques.**

NOTE

L'utilisation de rechanges autres que les pièces d'origine Ingersoll–Rand pt causer des risques d'insécurité, réduire les performances de l'outil et augmenter l'entretien, et pt annuler toutes les garanties.
Les réparations ne doivent être effectuées que par des réparatrs qualifiés autorisés. Consultez votre Centre de Service Ingersoll–Rand le plus proche.

Adressez toutes vos communications au Bureau Ingersoll–Rand ou distributeur le plus proche.

Imprimé aux É.U.

INGERSOLL-RAND®
PROFESSIONAL TOOLS

SIGNIFICATION DES ETIQUETTES D'AVERTISSEMENT

⚠ ATTENTION

LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PT CAUSER DES BLESSURES

⚠ ATTENTION

Porter toujours des lunettes de protection pendant l'utilisation et l'entretien de cet outil.

⚠ ATTENTION

Porter toujours une protection acoustique pendant l'utilisation de cet outil.

⚠ ATTENTION

Couper toujours l'alimentation d'air comprimé et débrancher le flexible d'alimentation avant d'installer, déposer ou ajuster tout accessoire sur cet outil, ou d'entreprendre une opération d'entretien quelconque sur l'outil.

⚠ ATTENTION

Les outils pnmatiques pvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables pvent causer des doulrs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de doulrs. Consulter un médecin avant de recommencer à utiliser l'outil.

⚠ ATTENTION

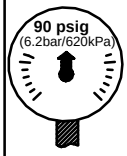
Ne pas transporter l'outil par son flexible.

⚠ ATTENTION

Ne pas utiliser des flexibles ou des raccords endommagés, effilochés ou détériorés.

⚠ ATTENTION

Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil.



⚠ ATTENTION

Utiliser de l'air comprimé à une pression maximum de 6,2 bar (620 kPa).

MISE EN SERVICE DE L'OUTIL

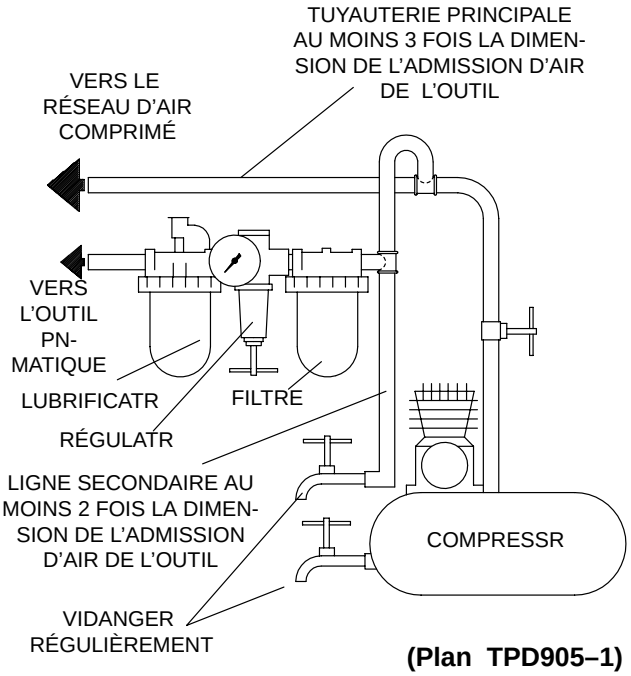
LUBRIFICATION

Ingersoll–Rand No. 50

Ingersoll–Rand No. 100

Utiliser toujours un lubrificatr avec ces outils. Nous recommandons l'emploi du filtre–régulatr–lubrificatr suivant :

USA – No. C22–04–G00



(Plan TPD905–1)

SPÉCIFICATIONS

Modèle	Poignée à levier	Entraînement	Coups par minute	Gamme de couples recommandée
		in.		**ft–lbs (Nm)**
1702SB1	en ligne	1/2" carré	1.500	13–85 (18–115)
1702P1	pistolet	1/2" carré	1.500	15–100 (21–136)

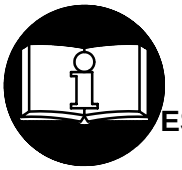
MANUAL DE USO Y MANTENIMIENTO PARA LLAVES DE IMPACTO DE SERVICIO PESADO DE LAS SERIES 1702SB1 Y 1702P1

E

NOTA

Las llaves de impacto modelos 1702SB1 y 1702P1 están diseñadas para trabajos de producción y de mantenimiento en talleres de reparación de equipos ligeros tales como máquinas de cortar césped y tractores hortícolas.
Ingersoll–Rand no aceptará responsabilidad alguna por la modificación de las herramientas efectuada por el cliente para las aplicaciones que no hayan sido consultadas con Ingersoll–Rand.

⚠ AVISO



SE ADJUNTA INFORMACIÓN IMPORTANTE DE SEGURIDAD.
LEA ESTE MANUAL ANTES DE USAR LA HERRAMIENTA.
ES RESPONSABILIDAD DE LA EMPRESA ASEGURARSE DE QUE EL OPERARIO ESTÉ AL TANTO DE LA INFORMACIÓN QUE CONTIENE ESTE MANUAL.
EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.

PARA PONER LA HERRAMIENTA EN SERVICIO

- **Utilice, examine y mantenga siempre esta herramienta conforme al código de seguridad para herramientas neumáticas portátiles de la American National Standards Institute (ANSI B186.1).**
- **Para seguridad, máximo rendimiento y vida de servicio de las piezas, use esta herramienta a una presión de aire máxima en la entrada de 90 psig (6,2 bar/620 kPa) con una manguera de suministro de aire con diámetro interno de 8 mm.**
- **Corte siempre el suministro de aire y desconecte la manguera de suministro de aire antes de instalar, desmontar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.**
- **No utilice mangueras de aire y racores dañados, desgastados ni deteriorados.**
- **Asegúrese que todas las mangueras y racores sean del tamaño correcto y estén bien apretados. Vea Esq. TPD905–1 para un típico arreglo de tuberías.**
- **Use siempre aire limpio y seco a una máxima presión de 90 psig (6,2 bar/620 kPa). El polvo, los gases corrosivos y/o el exceso de humedad podrían estropear el motor de una herramienta neumática.**
- **No lubrique las herramientas con líquidos inflamables o volátiles tales como queroseno, gasoil o combustible para motores a reacción.**
- **No saque ninguna etiqueta. Sustituya toda etiqueta dañada.**

USO DE LA HERRAMIENTA

- **Use siempre protección ocular cuando maneje, o realice operaciones de mantenimiento en esta herramienta.**
- **Use siempre protección para los oídos cuando maneje esta herramienta.**
- **Mantenga las manos, la ropa suelta y el cabello largo alejados del extremo giratorio de la herramienta.**
- **Note la posición de la palanca de inversión antes de hacer funcionar la herramienta para ser consciente de su dirección giratoria cuando funcione el estrangulador.**
- **Anticipe y esté alerta sobre los cambios repentinos en el movimiento durante la puesta en marcha y el manejo de toda herramienta motorizada.**
- **Mantenga una postura de cuerpo equilibrada y firme. No estire demasiado los brazos al manejar la herramienta. Pueden ocurrir reacciones de alto par a, o a menos de, la recomendada presión de aire.**
- **El eje de la herramienta podría seguir girando brevemente después de haber soltado la palanca de mando.**
- **Las herramientas neumáticas pueden vibrar durante el uso. La vibración, repetición o posiciones incómodas pueden dañarle los brazos y manos. En caso de incomodidad, sensación de hormigueo o dolor, deje de usar la herramienta. Consulte a un médico antes de volver a usarla otra vez.**
- **Utilice únicamente los accesorios Ingersoll–Rand recomendados.**
- **Utilice únicamente bocas y accesorios para llaves de impacto. No utilice bocas o accessorios manuales (cromados).**
- **Las llaves de impacto no son llaves de par. Las uniones que requieran pares específicos deberán ser comprobadas con un torsiómetro después de haberlas fijado con una llave de impacto.**
- **Esta herramienta no ha sido diseñada para trabajar en ambientes explosivos.**
- **Esta herramienta no está aislada contra descargas eléctricas.**

NOTA

El uso de piezas de recambio que no sean las auténticas piezas Ingersoll–Rand podría poner en peligro la seguridad, reducir el rendimiento de la herramienta y aumentar los cuidados de mantenimiento necesarios, así como invalidar toda garantía. Las reparaciones sólo serán realizadas por personal cualificado y autorizado. Consulte con el centro de servicio Ingersoll–Rand autorizado más próximo.

Toda comunicación se deberá dirigir a la oficina o al distribuidor Ingersoll–Rand más próximo.

Impreso en EE. UU.

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ETIQUETAS DE AVISO

⚠ AVISO

EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.

⚠ ADVERTENCIA

Usar siempre protección ocular al manejar o realizar operaciones de mantenimiento en esta herramienta.

⚠ ADVERTENCIA

Las herramientas neumáticas pueden vibrar durante el uso. La vibración, los movimientos repetitivos o las posiciones incómodas podrían dañarle los brazos y las manos. En caso de incomodidad, sensación de hormigueo o dolor, dejar de usar la herramienta. Consultar al médico antes de volver a utilizarla.

⚠ ADVERTENCIA

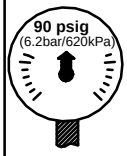
Mantener una postura del cuerpo equilibrada y firme. No estirar demasiado los brazos al manejar la herramienta.

⚠ ADVERTENCIA

Usar siempre protección para los oídos al manejar esta herramienta.

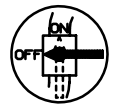
⚠ ADVERTENCIA

No coger la herramienta por la manguera para levantarla.



⚠ ADVERTENCIA

Manejar la herramienta a una presión de aire máxima de 90 psig (6,2 bar/620 kPa).



⚠ ADVERTENCIA

Cortar siempre el suministro de aire y desconectar la manguera de suministro de aire antes de instalar, retirar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.

⚠ ADVERTENCIA

No utilizar mangueras de aire y accesorios dañados, desgastados ni deteriorados.

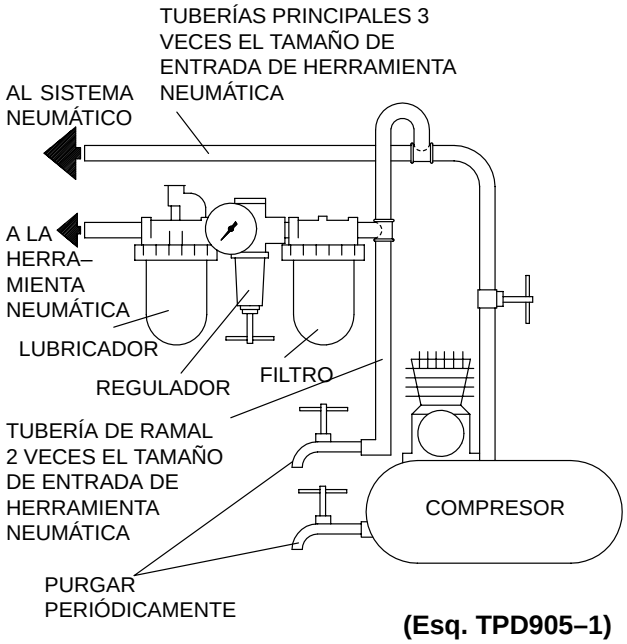
PARA PONER LA HERRAMIENTA EN SERVICIO

LUBRICACIÓN

Ingersoll–Rand Nº. 50 **Ingersoll Rand Nº. 100**

Utilice siempre un lubricador de aire comprimido con estas herramientas. Recomendamos la siguiente unidad de Filtro–Lubricador–Regulador:

USA – No. C22–04–G00



(Esq. TPD905–1)

ESPECIFICACIONES

Modelo	Tipo de Empuñadura	Accionamiento	Impactos por minuto	Gama de par recomendada
		pulg.		**ft–lbs (Nm)**
1702SB1	en linea	1/2” cuadradillo	1.500	13–85 (18–115)
1702P1	pistola	1/2” cuadradillo	1.500	15–100 (21–136)

P

MANUAL DE FUNCIONAMENTO E MANUTENÇÃO PARA AS FERRAMENTAS DE PERCUSSÃO PARA TRABALHO PESADO 1702SB1 E 1702P1

AVISO

As Ferramentas de Percussão Modelos 1702SB1 e 1702P1 são concebidas para aplicações de produção e de manutenção que envolvam oficinas de reparação para equipamento ligeiro como corta–relvas e tractores para jardinagem.
A Ingersoll–Rand não é responsável por modificações, feitas pelo cliente em ferramentas, nas quais a Ingersoll–Rand não tenha sido consultada.

⚠ ADVERTÊNCIA

INFORMAÇÃO DE SEGURANÇA IMPORTANTE EM ANEXO.
LEIA ESTE MANUAL ANTES DE OPERAR A FERRAMENTA.
É DA RESPONSABILIDADE DO EMPREGADOR COLOCAR A INFORMAÇÃO DESTE MANUAL NAS MÃOS DO OPERADOR.
O NÃO CUMPRIMENTO DAS SEGUINTES ADVERTÊNCIAS PODE RESULTAR EM FERIMENTOS.

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

- **Sempre opere, inspeccione e mantenha esta ferramenta de acordo com o Código de Segurança do Instituto Americano de Padrões Nacionais para Ferramentas Pneumáticas Portáteis (ANSI B186.1).**
- **Para segurança, máximo desempenho e máxima durabilidade das peças, opere esta ferramenta com uma pressão de ar máxima de 6,2 bar/620 kPa (90 psig) na entrada da mangueira de alimentação de ar com diâmetro interno de 8 mm (5/16”).**
- **Desligue sempre a alimentação de ar e desconecte a mangueira de alimentação de ar antes de instalar, remover ou ajustar qualquer acessório nesta ferramenta, ou antes de executar qualquer serviço de manutenção nesta ferramenta.**
- **Não use mangueiras de ar ou adaptadores danificados, gastos ou deteriorados.**
- **Certifique–se de que todas as mangueiras e adaptadores sejam do tamanho correcto e estejam apertados com firmeza. Veja o Desenho TPD905–1 para um arranjo típico de tubagem.**
- **Use sempre ar seco e limpo com pressão máxima de 6,2 bar/620 kPa (90 psig). Pó, fumos corrosivos e/ou humidade excessiva podem arruinar o motor de uma ferramenta pneumática.**
- **Não lubrifique as ferramentas com líquidos inflamáveis ou voláteis tais como querosene, diesel ou combustível de jactos.**
- **Não remova nenhum rótulo. Reponha qualquer rótulo danificado.**

USANDO A FERRAMENTA

- **Use sempre óculos de protecção quando estiver operando ou executando serviço de manutenção nesta ferramenta.**
- **Use sempre protecção contra ruído ao operar esta ferramenta.**
- **Mantenha as mãos, partes do vestuário soltas e cabelos compridos afastados da extremidade em rotação.**
- **Observe qual é a posição da alavanca que reverte o sentido de rotação antes de operar esta ferramenta de modo a estar atento ao sentido de rotação quando operar o regulador de pressão.**
- **Antecipe e esteja alerta a mudanças repentinas no movimento quando ligar e operar qualquer ferramenta motorizada.**
- **Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer na ou abaixo da pressão de ar recomendada.**
- **O eixo da ferramenta pode continuar a girar brevemente após a pressão tenha sido aliviada.**
- **Ferramentas accionadas pneumáticamente podem vibrar em uso. Vibração, movimentos repetitivos ou posições desconfortáveis podem ser prejudiciais às mãos e aos braços. Pare de usar a ferramenta caso ocorra algum desconforto, sensação de formigueiro ou dor. Procure assistência médica antes de retornar ao trabalho.**
- **Use acessórios recomendados pela Ingersoll–Rand.**
- **Use somente soquetes e acessórios de impacto. Não use soquetes ou acessórios de mão (cromo).**
- **Ferramentas Pneumáticas de impacto não são chaves dinamométricas de torque. As conexões que requerem um torque específico devem ser verificadas com um torquímetro depois de adaptadas com uma chave dinamométrica de impacto.**
- **Esta Ferramenta não foi concebida para trabalhos em atmosferas explosivas.**
- **Esta Ferramenta não está isolada contra choques eléctricos.**

AVISO

O uso de peças de substituição que não sejam genuinamente da Ingersoll–Rand podem resultar em riscos de segurança, diminuição do desempenho da ferramenta, aumento da necessidade de manutenção e pode invalidar todas as garantias.

As reparações devem ser feitas somente por pessoal treinado autorizado. Consulte o Centro de Serviços da Ingersoll–Rand mais próximo.

Envie Todos os Comunicados Para o Distribuidor ou Escritório da Ingersoll–Rand Mais Próximo.

Impresso nos E.U.A.

INGERSOLL-RAND®
PROFESSIONAL TOOLS

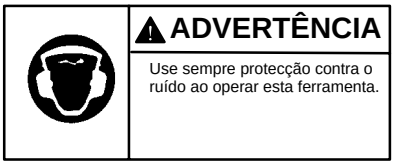
IDENTIFICAÇÃO DO RÓTULO DE ADVERTÊNCIA

⚠ ADVERTÊNCIA

O NÃO CUMPRIMENTO DAS SEGUINTES ADVERTÊNCIAS PODE RESULTAR EM FERIMENTO.

⚠ ADVERTÊNCIA

Use sempre óculos de protecção quando estiver operando ou executando algum serviço de manutenção nesta ferramenta.



⚠ ADVERTÊNCIA

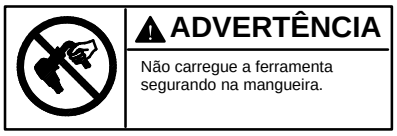
Use sempre protecção contra o ruído ao operar esta ferramenta.

⚠ ADVERTÊNCIA

Desligue sempre a alimentação de ar e desconecte a mangueira de alimentação de ar antes de instalar, remover ou ajustar qualquer acessório nesta ferramenta, ou antes de executar algum serviço de manutenção nesta ferramenta.

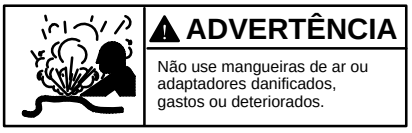
⚠ ADVERTÊNCIA

Ferramentas accionadas pneumáticamente podem vibrar em uso. Vibração, movimentos repetitivos ou posições desconfortáveis podem ser prejudiciais às mãos e aos braços. Pare de usar a ferramenta caso ocorra algum desconforto, sensação de formigueiro ou dor. Procure assistência médica antes de retornar ao trabalho.



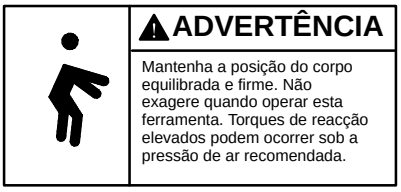
⚠ ADVERTÊNCIA

Não carregue a ferramenta segurando na mangueira.



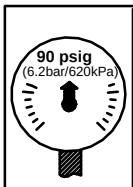
⚠ ADVERTÊNCIA

Não use mangueiras de ar ou adaptadores danificados, gastos ou deteriorados.



⚠ ADVERTÊNCIA

Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer sob a pressão de ar recomendada.



⚠ ADVERTÊNCIA

Opere com pressão do ar Máxima de 90–100 psig (6,2–6,9 bar).

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

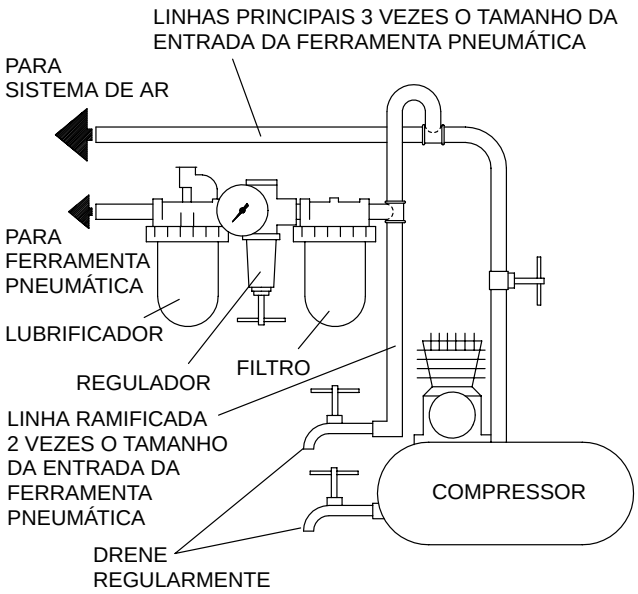
LUBRIFICAÇÃO

Ingersoll–Rand No. 50

Ingersoll–Rand No. 100

Use sempre um lubrificador de ar de linha com estas ferramentas. Nós recomendamos a seguinte Unidade Filtro–Lubrificador–Regulador:

USA – No. C22–04–G00

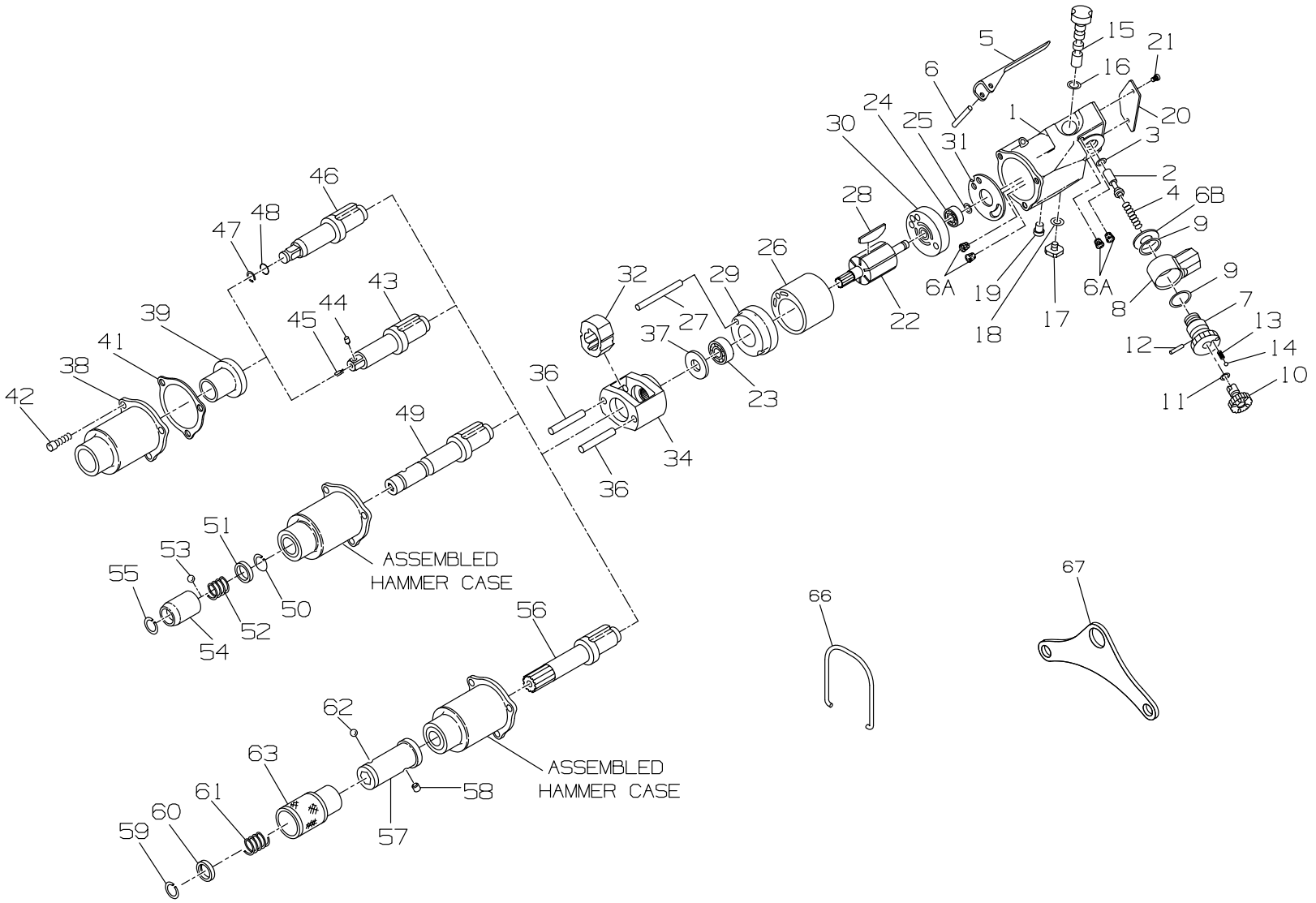


(Desenho TPD905–1)

ESPECIFICAÇÕES

Modelo	Tipo de Pega	Accionamento	Impactos por min.	Gama de Binário Recomendada
		pol.		ft–lbs (Nm)
1702SB1	en linha	1/2 pol. quadr.	1.500	13–85 (18–115)
1702P1	pistola	1/2 pol. quadr.	1.500	15–100 (21–136)

SERIES 1702SB1



(Dwg. TPA978–2)

PART NUMBER FOR ORDERING

	1	Motor Housing Assembly	1702SB–A40
	2	Throttle Valve	R000B2–302
♦ •	3	Throttle Valve Face	401–159
♦	4	Throttle Valve Spring	5081T–151
	5	Throttle Lever	201–273
	6	Throttle Lever Pin	502B–120
♦	6A	Silencer (4)	1702SB–311
	6B	Inlet Assembly Spacer	R00–35A
		Air Inlet Assembly	1702B–A166
	7	Swivel Inlet Body	1702B–165
	8	Swivel Inlet Assembly	1702B–B166
♦ •	9	Swivel Inlet Seal (2)	R18LF–21
	10	Power Regulator Assembly	1702B–A249
♦ •	11	Power Regulator Seal	R00B1–159
	12	Regulator Retainer	201–250
♦	13	Detent Spring	201–251
♦	14	Detent Ball	R000B–263
	15	Reverse Valve Assembly	1702B–A329
♦ •	16	Reverse Valve Seal	R0BR1C–283
	17	Reverse Valve Stop	401–665
♦ •	18	Bushing Seal	CE110–210
	19	Grease Fitting	130SR–188
	20	Nameplate	1702SB–301

PART NUMBER FOR ORDERING

	21	Nameplate Screw (3)	BN403–302
	22	Rotor	401–53
♦	23	Front Rotor Bearing	R00H–97
♦ •	24	Rear Rotor Bearing	401–22
♦	25	Rear Rotor Bearing Retainer	MF–18
	26	Cylinder	401–3
	27	Cylinder Dowel	HH92–74
♦ •	28	Vane Packet (set of 6 Vanes)	401–42A
	29	Front End Plate	201–11
	30	Rear End Plate	201–12
♦ •	31	End Plate Gasket	401–739
•	32	Hammer	1702–724A
	34	Hammer Frame Assembly	1702–A703A
•	36	Hammer Pin (2)	1702–704
	37	Hammer Frame Washer	1702–706
	38	Hammer Case Assembly	1702–A727
	39	Hammer Case Bushing	401–641
	*	Hammer Case Label	WARNING–2–99
	*	.005” Oversize Hammer Case Bushing	401–641–5

* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

♦ Indicates Tune–up Kit part.

		PART NUMBER FOR ORDERING				PART NUMBER FOR ORDERING
♦ •	41	Hammer Case Gasket	401–36	58	Body Lock Pin	I0A902A5–936
	42	Hammer Case Cap Screw (3)	1702–638	59	Thrust Ring Lock	4U–933–7
	43	3/8” Square Drive Anvil Assembly		60	Thrust Ring	4U–932–7
		(with pin–type retainer)	1702–P726	61	Retaining Sleeve Spring	4U–931–7
♦	44	Socket Retaining Plunger	2902–716	62	Retaining Ball (7/32” diameter steel)	2U–722
♦	45	Retaining Plunger Spring	401–718	63	Retaining Sleeve	I0A902A5–930
	46	3/8” Square Drive Anvil Assembly		*	Tune–up Kit (includes illustrated parts 3, 4,	
		(with ring–type retainer)	1702–A626		6A [4], 9 [2], 11, 13, 14, 16, 18, 23, 24, 25, 28,	
	47	Socket Retaining Ring	1702–425		31, 41, 44 and 45)	1702SB–TK2
	48	Retainer Support Ring	1702–426	66	Vertical Hanger	1901–365
		Quick Change Anvil Assembly	1702–A926–4	67	Horizontal Hanger	1901–366
	49	Anvil (1/4” hex recess)	1702–926–4	*	Socket Adapter (3/8” to 1/2”)	2U–215
	50	Thrust Ring Lock	5C1–853	*	Lube Injector	230–228
	51	Thrust Ring	I0A902A2–932–4	*	Bottle of Oil	405–M01
	52	Retaining Sleeve Spring	2U–93l–4	*	Tube of Grease	201–MG1
	53	Retaining Ball (5/32” diameter steel)	2U–696	*	Quick–Change Chuck	
	54	Retaining Sleeve	211–930–4		for 1/4” hex shank accessories	2U–A925–4
	55	Retaining Sleeve Stop	2U–933–4		for 7/16” hex shank accessories	502–A925–7
		Quick–Change Anvil Assembly	1702–A926–7			
	56	Quick–Change Anvil	1702–926–7			
	57	Anvil Body (7/16” hex recess)	I0A902A5–925			

* Not illustrated.

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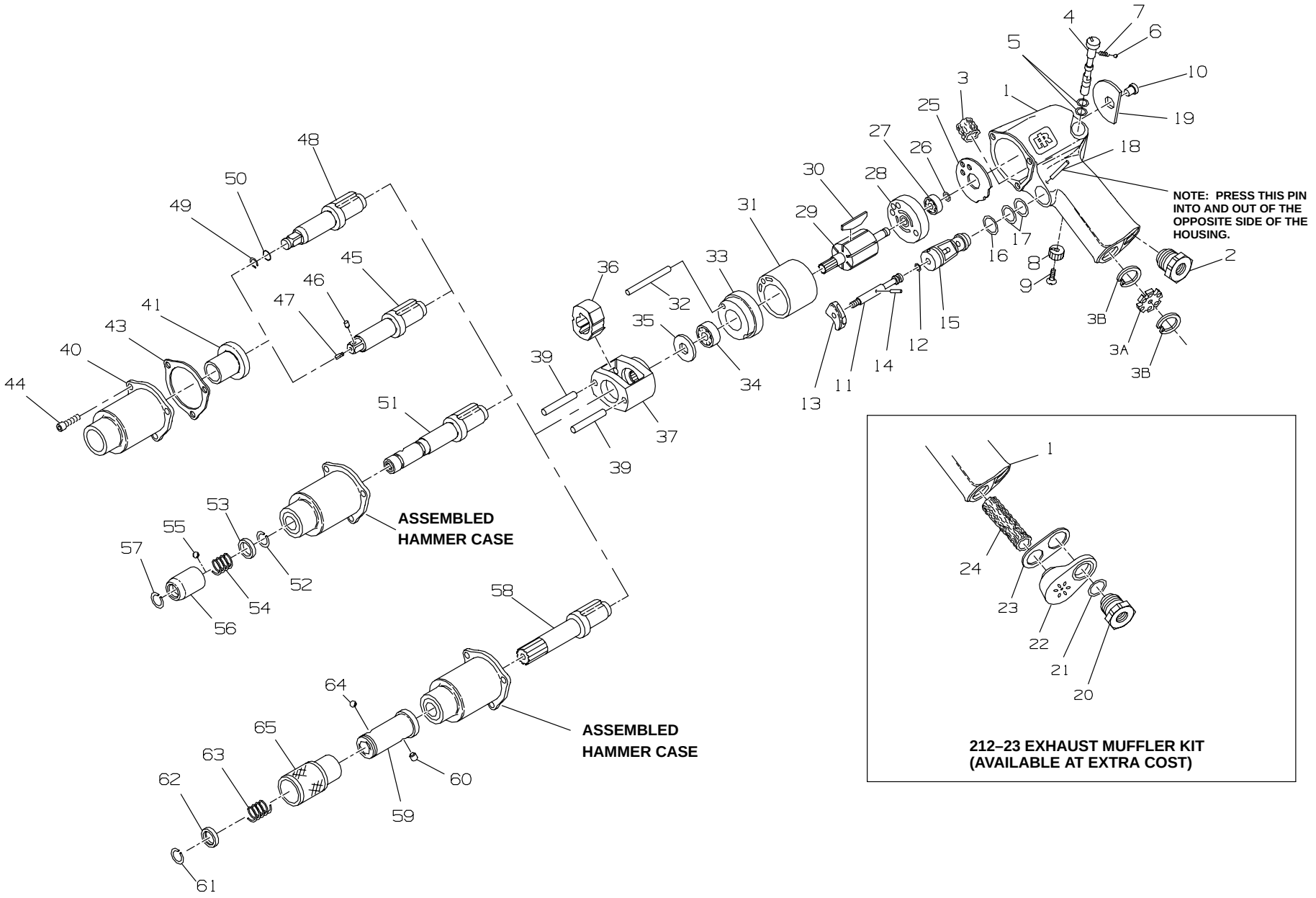
♦ Indicates Tune–up Kit part.

SERIES 1702P



(Dwg. TPA979–3)

			PART NUMBER FOR ORDERING				PART NUMBER FOR ORDERING
	1	Motor Housing Assembly	1702P–A40		19	Nameplate	1702P–301
	2	Inlet Bushing	402–565			Exhaust Muffler Kit	212–K23
	3	Exhaust Silencer	202–311		20	Inlet Bushing Assembly	202–A565
	3A	Exhaust Deflector	1702P–123	♦ •	21	Bushing O–ring	202–103
	3B	Deflector Retaining Ring (2)	2908–304		22	Exhaust Deflector	202–23
	4	Reverse Valve	1702P–329	♦ •	23	Deflector Gasket	202–223
♦ •	5	Reverse Valve O–ring (2)	CE110–210	♦ •	24	Exhaust Silencer	728–310
♦	6	Detent Ball	R000B–263	♦ •	25	End Plate Gasket	202–739
♦	7	Detent Ball Spring	202–664	♦	26	Rear Rotor Bearing Retainer	MF–18
	8	Reverse Valve Knob	1702P–666	♦	27	Rear Rotor Bearing	401–22
	9	Knob Screw	WWAl00–77	•	28	Rear End Plate	201–12
	10	Grease Fitting	130SR–188		29	Rotor	401–53
		Throttle Valve Assembly	202–A302	♦ •	30	Vane Packet (set of 6 Vanes)	401–42A–6
	11	Throttle Valve	202–302		31	Cylinder	401–3
♦ •	12	Throttle Valve Face	R000BR1C–283		32	Cylinder Dowel	HH92–74
	13	Trigger	5RA–93	•	33	Front End Plate	201–11
	14	Throttle Valve Retaining Pin	AF120–322	♦	34	Front Rotor Bearing	R00H–97
	15	Throttle Valve Bushing	202–503		35	Hammer Frame Washer	1702–706
♦ •	16	Bushing O–ring, Large	410–283		36	Hammer	1702–724A
♦ •	17	Bushing O–ring, Small (2)	202–290		37	Hammer Frame Assembly	1702–A703A
	18	Bushing Retaining Pin	R100B–120		39	Hammer Pin (2)	1702–704

* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

♦ Indicates Tune–up Kit part.

			PART NUMBER FOR ORDERING			PART NUMBER FOR ORDERING
	40	Hammer Case Assembly	1702–A727		Quick–Change Anvil Assembly	1702–A926–7
	41	Hammer Case Bushing	401–641	58	Quick–Change Anvil	1702–926–7
	*	Hammer Case Label	WARNING–2–99	59	Anvil Body (7/16” hex recess)	I0A902A5–925
	*	.005” Oversize Hammer Case Bushing	401–641–5	60	Body Lock Pin	I0A902A5–936
♦	43	Hammer Case Gasket	401–36	61	Thrust Ring Lock	4U–933–7
	44	Hammer Case Cap Screw (3)	1702–638	62	Thrust Ring	4U–932–7
	45	3/8” Square Drive Anvil Assembly (with Pin–Type Retainer)	1702–P726	63	Retaining Sleeve Spring	4U–931–7
				64	Retaining Ball (7/32” diameter steel)	2U–722
♦ •	46	Socket Retaining Plunger	5020–716	65	Retaining Sleeve	I0A902A5–930
♦ •	47	Retaining Plunger Spring	401–718	*	Tune–up Kit (includes illustrated parts 5 [2], 6, 7, 12, 16, 17 [2], 21, 23, 24, 25, 26, 27, 30, 34, 43, 46 and 47)	1702P–TK2
	48	3/8” Square Drive Anvil Assembly (with Ring–Type Retainer)	1702–A626			
•	49	Socket Retaining Ring	1702–425	*	Vertical Hanger	1901–365
•	50	Retainer Support Ring	1702–426	*	Horizontal Hanger	1901–366
		Quick–Change Anvil Assembly	1702–A926–4	*	Socket Adapter (3/8” to 1/2”)	2U–215
	51	Quick–Change Anvil (1/4” hex recess)	1702–926–4	*	Lube Injector	230–228
				*	Tube of Grease	201–MG1
	52	Thrust Ring Lock	5C1–583	*	Bottle of Oil	405–M01
	53	Thrust Ring	I0A902A2–932–4	*	Quick–Change Chuck	
	54	Retaining Sleeve Spring	2U–931–4		for 1/4” hex shank accessories	2U–A925–4
	55	Retaining Ball (5/32” diameter steel)	2U–696		for 7/16” hex shank accessories	502–A925–7
	56	Retaining Sleeve	2U–930–4			
	57	Retaining Sleeve Stop	2U–933–4			

* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

♦ Indicates Tune–up Kit part.

⚠ WARNING

Always wear eye protection when operating or performing maintenance on this tool.

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.

LUBRICATION

Each time a Model 1702 Impactool is disassembled for maintenance and repair or replacement of parts, lubricate the tool as follows:

1. Work approximately 3 cc of Ingersoll–Rand Impactool Grease No. 100 into the impact mechanism.
2. **For 1702SB1,** coat the front portion of the Anvil (43, 46, 49 or 56) with a small amount of Ingersoll–Rand No. 100 Grease before applying the Hammer Case Assembly (38).
   For 1702P1, coat the front portion of the Anvil (45, 48, 51 or 58) with a small amount of Ingersoll–Rand No. 100 Grease before applying the Hammer Case Assembly (40).
3. Inject 1.5 cc of Ingersoll–Rand No. 50 Oil into the inlet of the tool after reassembly.

POWER REGULATOR ADJUSTMENT

Model 1702P1 is equipped with a combination power regulator/reverse valve designed to provide power adjustment in one direction of rotation while maintaining full power in the opposite direction of rotation. The power output in either direction is calibrated by the numbers 1 through 5 stamped on the Reverse Valve (4) and Knob (8). Number ”5” designates maximum power and number ”1” designates minimum power.

Power Adjustment of 1702P1 for Running Right–Hand Thread Fasteners

1. While facing the back of the Impactool, push the Reverse Valve (4) to the extreme left position.
2. Rotate the Reverse Valve so the desired power setting is aligned with the small indicator line on the Motor Housing (1).
3. The 1702P1 will now drive a night–hand thread fastener at the power setting you have selected. It will remove the same right–hand fastener under **full power.** This adjustment will not change regardless of how many times you shift the Reverse Valve as long as you do not change the power selection.

Power Adjustment of 1702P1 for Running Left–Hand Thread Fasteners

1. While facing the back of the Impactool, push the Reverse Valve (4) to the extreme right position.
2. Rotate the Reverse Valve so the desired power setting is aligned with the small indicator line on the Motor Housing (1).
3. The 1702P1 will now drive a left–hand fastener at the power setting you have selected. It will remove the same left–hand fastener under **full power.** This adjustment will not change regardless of how many times you shift the Reverse Valve as long as you do not change the power selection.

Power Adjustment for 1702SB

Adjust the power on Model 1702SB1 by rotating the Power Regulator (10) so that one of the numbers on the Power Regulator aligns with the indicator mark on the rim of the Swivel Inlet Body (7). The power output in either direction is calibrated by the numbers “1” through “5” stamped on Power Regulator. Number “5” designates maximum power and number “1” designates minimum power.

DISASSEMBLY

General Instructions

1. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
2. Whenever grasping a tool or part in a vise, always use leather–covered or copper–covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for repairs or replacement.
4. Do not disassemble the tool unless you have a complete set of new gaskets and O–rings for replacement.

Disassembly of the Impact Mechanism for 1702SB

1. Grasp the Motor Housing (1) in vise jaws, square driver upward.
2. Remove the Hammer Case Cap Screws (42) and withdraw the Hammer Case (38) and Hammer Case Gasket (41) from the Housing.
3. Grasp the Hammer Frame (34) and carefully lift off the entire impact mechanism, making certain you do not drop the two Hammer Pins (36).
4. Set the mechanism on a workbench, driver end up.
5. Grasp the Anvil (43, 46, 49 or 56) and lift it from the impact mechanism.
6. Remove the two Hammer Pins and Hammer (32).

Disassembly of the Impact Mechanism for 1702P1

1. Grasp the Motor Housing (1) in vise jaws, square driver upward.
2. Remove the Hammer Case Cap Screws (44) and withdraw the Hammer Case (40) and Hammer Case Gasket (43) from the Housing.
3. Grasp the Hammer Frame (37) and carefully lift off the entire impact mechanism, making certain you do not drop the two Hammer Pins (39).
4. Set the mechanism on a workbench, driver end up.
5. Grasp the Anvil (45, 48, 51 or 58) and lift it from the impact mechanism.
6. Remove the two Hammer Pins and Hammer (36).

Disassembly of the Motor for 1702SB1

1. Grasp the splined end of the Rotor (22) and pull the entire motor from the Housing.
2. Lift off the Hammer Frame Washer (37).
3. Lift off the Front End Plate (29). If the Front Rotor Bearing (23) needs to be replaced, press it from the Front End Plate.
4. Remove the Cylinder (26) and the Vanes (28).
5. Remove the Rear Rotor Bearing Retainer (25) and slide the Rear End Plate (30) and Rear Rotor Bearing (24) off the short hub of the Rotor.
6. Remove the End Plate Gasket (31) from the Motor Housing.

Disassembly of the Motor for 1702P1

1. Grasp the splined end of the Rotor (29) and pull the entire motor from the Housing.
2. Lift off the Hammer Frame Washer (35).
3. Lift off the Front End Plate (33). If the Front Rotor Bearing (34) needs to be replaced, press it from the Front End Plate.
4. Remove the Cylinder (31) and the Vanes (30).
5. Remove the Rear Rotor Bearing Retainer (26) and slide the Bearing (27) and Rear End Plate (28) off the short hub of the Rotor.
6. Remove the End Plate Gasket (25) from the Motor Housing.

Disassembly of Reverse Valve, Throttle and Inlet for 1702SB1

NOTICE

In this first step, the Valve Stop is installed with a suitable thread–locking compound.

1. Unscrew the Reverse Valve Stop (17) from the Reverse Valve (15).
2. Slowly rotate the Reverse Valve back and forth while withdrawing it from the reverse valve bushing. Remove the Reverse Valve Seal (16) from the Reverse Valve and the Bushing Seal (18) from the undercut inside the reverse valve bushing.
3. Using a punch, carefully drive the Throttle Lever Pin (6) from the Motor Housing and remove the Throttle lever (5).
4. Hold the Motor Housing firmly in a vise, taking care not to distort the motor bore. Using a wrench on the machined flats and turning counterclockwise, remove the Swivel Inlet Body (7).
5. Remove the Swivel Inlet Assembly (8) and Seals (9) from the Swivel Inlet Body. Remove the the Inlet Assembly Spacer (6B).

NOTICE

In the following step, be careful not to lose the Detent Ball and Spring.

6. Push the Regulator Retainer (12) through the Swivel Inlet Body and remove the Power Regulator Assembly (10), Detent Ball (14) and Detent Spring (13).
7. Withdraw the Throttle Valve Spring (4) and Throttle Valve (2). Remove the Throttle Valve Face (3) from the Throttle Valve.
8. Remove Silencers (6A).

Disassembly of Reverse Valve, Throttle and Inlet for 1702P1

NOTICE

In this first step, the Knob Screw is installed with a suitable thread–locking compound.

1. Unscrew and remove the Knob Screw (9). Remove the Reverse Valve Knob (8).
2. Slowly rotate the Reverse Valve (4) back and forth while withdrawing it from the reverse valve bushing.

NOTICE

Be careful not to lose the Detent Ball (6) and Detent Ball Spring (7) from the hole in the side of the Reverse Valve.

3. Remove the two Reverse Valve O–rings (5) from the undercut at each end of the reverse valve bushing.
4. Using a pin punch, tap out the Bushing Retaining Pin (18) from left to right while facing the back of the tool. (Refer to Drawing TPA979–4). Remove the entire Throttle Valve Assembly.
5. If it is necessary to replace the Trigger (13), pull it off the Throttle Valve (11).
6. Remove the Large Bushing O–ring (16) and one Small Bushing O–ring (17) from the Throttle Valve Bushing (15). Remove the other Small Bushing O–ring (17) seated in the recess of the handle.

7. Using a pin punch, tap out the Throttle Valve Retaining Pin (14) to release the Throttle Valve from the Throttle Valve Bushing.
8. Remove the Throttle Valve Face (12) from the annular groove at the end of the Throttle Valve.
9. Unscrew and remove the Inlet Bushing (2), Exhaust Deflector Retaining Rings (3B) and Exhaust Deflector (3A).
10. If your tool is equipped with a built–in muffler, lift off the Exhaust Deflector (22) and Deflector Gasket (23). Using an awl, remove the Exhaust Silencer (24) from the handle.

ASSEMBLY

General Instructions

1. Always press on the inner ring of a ball type bearing when installing the bearing on a shaft.
2. Always press on the outer ring of a ball type bearing when pressing the bearing 1nto a bearing recess.
3. Whenever grasping a tool or part in a vise, always use leather–covered or copper–covered vise jaws. Take extra care with threaded parts and housings.
4. Always clean every part, and wipe every part with a thin film of oil before installation.
5. Always apply O–ring lubricant to O–rings before assembly.

Assembly of Reverse Valve, Throttle and Inlet for 1702SB1

1. Install new Silencers (6A) in the Motor Housing (1).
2. Install a new Power Regulator Seal (11) in the groove closest to the knurled knob on the Power Regulator (10). Place the Detent Spring (13) and Detent Ball (14) in the shallow hole in the hexagon flange of the Swivel Inlet Body (7) and insert the Power Regulator Assembly into the Swivel Inlet Body from the hexagon flange end.
3. Align the groove on the end of the Regulator Shaft with the through hole in the Swivel Inlet Body and insert the Regulator Retainer (12). The Regulator will turn firmly but freely within the Body when properly assembled.
4. Place a new Swivel Inlet Seal (9) in each counterbore in the Swivel Inlet (8) and slide the Inlet over the threaded end of the Swivel Inlet Body.
5. Install a new Throttle Valve Face (3) in the groove on the Throttle Valve (2) and insert the assembled Throttle Valve, stem first, into the tapped hole in the Motor Housing (1).
6. Next, insert the Throttle Valve Spring (4) into the tapped hole in the Housing and retain the Throttle parts with the–Swivel Inlet. Install the Inlet Assembly Spacer (6B) between the Motor Housing and the Swivel Inlet. Thread the Inlet into the tapped hole clockwise and tighten between 23 and 27 ft–lb (31.2 and 36.6 Nm) torque.
7. Align the holes in the Throttle Lever (5) with the holes in the boss on top of the Motor Housing and press the Throttle Lever Pin (6) into the through hole. Depress the Throttle Lever several times to check freeness of movement.
8. Insert a new Bushing Seal (18) into the undercut inside the reverse valve bushing, making certain it is firmly seated.
9. Install a new Reverse Valve Seal (16) in the groove closest to the hexagon end on the Reverse Valve (15).

CAUTION

When installing the Valve, rotate the Valve back and forth slowly, being careful not to damage the Seals when inserting the Valve in the bushing. Coat the Reverse Valve with a small amount of the recommended oil and insert the tapered end of the Valve into the Housing bushing from left to right when facing the rear of the tool until the tapered end of the Valve protrudes from the right side of the Housing.

10. Apply a suitable thread–locking compound to the first two or three threads of the Reverse Valve Stop (17) and thread the Stop into the tapped end of the Reverse Valve. Tighten the Stop between 4 and 7 in–lb (.5 and .8 Nm) torque.

Assembly of Reverse Valve, Throttle and Inlet for 1702P1

1. Install two Reverse Valve O–rings (5) in the undercut at each end of the reverse valve bushing.

NOTICE

In this step, install the Reverse Valve from left to right while facing the rear of the tool.

2. Install the Detent Ball Spring (7) and Detent Ball (6) in the Reverse Valve (4) and while sliding the Reverse Valve into the reverse valve bushing, compress the Spring and Ball until they seat in the bushing.
3. Insert the Knob Screw (9) through the Reverse Valve Knob (8). Apply Loctite No. 242 to the first two or three threads of the Screw and thread the Screw into the tapped end of the Reverse Valve. While holding the serrated end of the Reverse Valve with pliers, tighten the Screw between 8 and 15 in–lb (.9 and 1.7 Nm) torque.
4. Install a new Throttle Valve Face (12) in the annular groove at the end of the Throttle Valve (11).
5. Install a new Large Bushing O–ring (16) and a new Small Bushing O–ring (17) into their respective grooves of the Throttle Valve Bushing (15). Seat the other new Small Bushing O–ring (17) into the recess of the Motor Housing.

6. Insert the Throttle Valve into the Throttle Valve Bushing, taking care to line up the retaining pin hole in the Throttle Valve with the elongated hole in the Bushing. Drive the Throttle Valve Retaining Pin (14) into the Throttle Valve pin hole.
7. If the Trigger (13) was removed, press it onto the end of the Throttle Valve.
8. Install the Throttle Valve Assembly into the Housing, taking care to line up the cross hole in the Throttle Valve Bushing with the retaining pin hole in the Housing. Drive in the Bushing Retaining Pin (18) from right to left when facing the rear of the tool. (Refer to Drawing TPA979–4). Work the Trigger a few times to assure a good sliding fit.
9. If the Exhaust Silencer (24) was removed, install it in the housing handle. Make sure the Silencer is rolled tightly for easy installation.

NOTICE

If you are installing an Exhaust Muffler Kit (20, 21, 22, 23 and 24) for the first time, you must first remove the Exhaust Deflector Retaining Ring (3B), the circular Exhaust Deflector (3A), and the second Exhaust Deflector Retaining Ring.

10. If your tool has a built–in muffler, install the Deflector Gasket (23) and Exhaust Deflector (22).
11. If using Inlet Bushing (2), install the Exhaust Deflector (3A) between the two Exhaust Deflector Retaining Rings (3B). Install the Inlet Bushing (2 or 20). Tighten the Bushing between 20 and 25 ft–lb (27.1 and 33.9 Nm) torque.
12. If the Nameplate (19) has become disfigured, replace it after transferring the proper serial number,

Assembly of the Motor for 1702SB1

1. Install a new End Plate Gasket (31) into the motor bore of the Motor Housing (1), making sure the holes in the Gasket align with those in the bottom of the Housing.
2. Slide the Rear End Plate (30) onto the short hub of the Rotor (22), with the bearing recess trailing.
3. Slide the Rear Rotor Bearing (24) onto the short hub of the Rotor against the Rear End Plate.
4. Install the Rear Rotor Bearing Retainer (25).
5. With the splined end of the Rotor upright, place the Cylinder (26), pocket end first, over the Rotor with the dowel hole and ports aligned with the holes in the Rear End Plate.
6. Apply a light film of oil to the Vanes (28) and insert them into the vane slots in the Rotor.
7. If the Front Rotor Bearing (23) was removed, press a new Bearing into the recess of the Front End Plate (29).
8. Slide the assembled Front End Plate over the splined hub of the Rotor, Bearing trailing, with the dowel hole and ports of the Front End Plate aligning with like holes in the Cylinder and Rear End Plate.
9. Insert a rod approximately 6” (150 mm) long and 1/8” (3.2 mm) in diameter through the aligned dowel holes in the two End Plates and Cylinder. Use the rod as a guide to insert the motor into the Motor Housing with the dowel hole and ports of the motor and End Plate Gasket aligned.
10. Grasp the Motor Housing in a vise, motor upward. Withdraw the rod and replace it with the Cylinder Dowel (27).

Assembly of the Motor for 1702P1

1. Install a new End Plate Gasket (25) into the motor bore of the Motor Housing (1), making sure the holes in the Gasket align with those in the bottom of the Housing.
2. Slide the Rear End Plate onto the short hub of the Rotor (29), with the bearing recess trailing.
3. Slide the Rear Rotor Bearing (27) onto the short hub of the Rotor against the Rear End Plate.
4. Install the Rear Rotor Bearing Retainer (26).
5. With the splined end of the Rotor upright, place the Cylinder (31), pocket end first, over the Rotor with the dowel hole and ports aligned with the holes in the Rear End Plate.
6. Apply a light film of oil to the Vanes (30) and insert them into the vane slots in the Rotor.
7. If the Front Rotor Bearing (34) was removed, press a new Bearing into the recess of the Front End Plate (33).
8. Slide the assembled Front End Plate over the splined hub of the Rotor, Bearing trailing, with the dowel hole and ports of the Front End Plate aligning with like holes in the Cylinder and Rear End Plate.
9. Insert a rod approximately 6” (150 mm) long and 1/8” (3.2 mm) in diameter through the aligned dowel holes in the two End Plates and Cylinder. Use the rod as a guide to insert the motor into the Motor Housing with the dowel hole and ports of the motor and End Plate Gasket aligned.
10. Grasp the Motor Housing in a vise, motor upward. Withdraw the rod and replace it with the Cylinder Dowel (32).

Assembly of the Impact Mechanism for 1702SB1

1. Place the Hammer Frame Washer (37) over the splined hub of the Rotor and against the Front Rotor Bearing.
2. Coat the spline and the pin holes of the Hammer Frame (34) with a light film of Ingersoll–Rand No. 100 Grease.
3. Install the Hammer Frame on the splined hub of the Rotor.
4. Coat the Hammer with a light film of Ingersoll–Rand No. 100 Grease, and slide the Hammer (32) into the Hammer Frame.
5. Coat the two Hammer Pins (27) with a light film of Ingersoll–Rand No. 100 Grease, and insert the Pins in the two pin holes of the Hammer Frame so that they engage the notches in the Hammer.
6. Coat the Anvil (43, 46, 49 or 56) with a light film of Ingersoll–Rand No. 100 Grease. Enter the Anvil into the Front Hammer Frame and through the Hammer until it seats in the Rear Hammer Frame.
7. If the Hammer Case Bushing (39) was removed, smear a thin film of Ingersoll–Rand No. 100 Grease on the surface of the Bushing and press the Bushing into the Hammer Case (38) from the large open end until the bushing flange contacts the Hammer Case.
8. Place the Hammer Case Gasket (41) over the front end of the Motor Housing with the holes in the Gasket and Housing aligned.
9. Slide the Hammer Case Assembly over the impact mechanism and install the Hammer Case Cap Screws (42). Tighten the Cap Screws to 45 in–lb (5.09 Nm) torque.

Assembly of the Impact Mechanism for 1702P1

1. Place the Hammer Frame Washer (35) over the splined hub of the Rotor and against the Front Rotor Bearing.
2. Coat the spline and the pin holes of the Hammer Frame (37) with a light film of Ingersoll–Rand No. 100 Grease.
3. Install the Hammer Frame on the splined hub of the Rotor.
4. Coat the Hammer (36) with a light film of Ingersoll–Rand No. 100 Grease, and slide the Hammer into the Hammer Frame.
5. Coat the two Hammer Pins (39) with a light film of Ingersoll–Rand No. 100 Grease, and insert the Pins in the two pin holes of the Hammer Frame so that they engage the notches on the Hammer.
6. Coat the Anvil (45, 48, 51 or 58) with a light film of Ingersoll–Rand No. 100 Grease. Enter the Anvil into the Front Hammer Frame and through the Hammer until it seats in the Rear Hammer Frame.
7. If the Hammer Case Bushing (41) was removed, smear a thin film of Ingersoll–Rand No. 100 Grease on the surface of the Bushing and press the Bushing into the Hammer Case (40) from the large open end until the bushing flange contacts the Hammer Case.
8. Place the Hammer Case Gasket (43) over the front end of the Motor Housing with the holes in the Gasket and Housing aligned.
9. Slide the Hammer Case Assembly over the impact mechanism and install the Hammer Case Cap Screws (44). Tighten the Cap Screws to 45 in–lb (5.09 Nm) torque.

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Low power	Dirty Inlet Bushing and/or Air Strainer Screen and/or Exhaust Silencer	Using a clean, suitable cleaning solution in a well ventilated area, clean Air Strainer Screen, Inlet Bushing and Exhuast Silencer.
	Worn or broken Vanes	Replace the **complete set** of Vanes.
	Worn or broken Cylinder and/or scored End Plates	Examine the Cylinder and replace it if it is worn or broken or if the bore is scored or wavy. Replace the End Plates if they are scored.
	Dirty motor parts	Disassemble the Tool and clean all parts with a wuitable cleaning solution, in a well ventilated area. Reassemble the Tool as instructed in this manual.
	Improper positioning of the Reverse Valve	Make certain that the Reverse Valve is **fully engaged** to the left or right.
Motor will not run	Incorrect assembly of the motor	Disassemble the motor and replace worn or broken parts and reassemble as instructed.
	Insufficient lubricant in impact mechanism	Remove the Hammer Case Assembly and lubricate the impact mechanism.
Tool will not impact	Broken or worn impact mechanism parts	Remove the Hammer Case Assembly and examine the impact mechanism parts. Replace any worn or broken parts.
	Impact mechanism assembled incorrectly	Refer to **Assembly of the Impact Mechanism.**

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

03531548
Έντυπο P6571-EU2
11η Έκδοση
Μάϊος, 1999 (GR)

ΟΔΗΓΙΕΣ ΓΙΑ ΣΕΙΡΕΣ 1702SB1, 1702P1 ΚΑΙ 1702P4 ΙΣΧΥΡΗΣ ΑΝΤΟΧΗΣ ΑΕΡΟΣΦΥΡΕΣ

ΣΗΜΕΙΩΣ

Οι Σειρές 1702SB1, 1702P1 και 1702P4 Ισχυρής Αντοχής Αερόσφυρες σχεδιάσθηκαν για χρήση σε ελαφρές εργασίες συναρμολογησης και συντήρησης μηχανημάτων.
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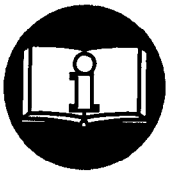

⚠ ΠΡΟΕΙΔΟΠΟΙΗΣ

**ΣΩΚΛΕΙΩΝΤΑΙ ΣΗΜΑΝΤΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ ΑΣΦΑΛΕΙΑΣ.
ΔΙΑΒΑΣΤΕ ΑΥΤΟ ΤΟ ΕΓΧΕΙΡΙΔΙΟ ΠΡΙΝ ΛΕΙΤΟΥΡΓΗΣΕΤΕ ΤΟ ΕΡΓΑΛΕΙΟ.
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ΕΑΝ ΔΕΝ ΑΚΟΛΟΥΘΗΣΕΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ ΜΠΟΡΕΙ ΝΑ ΠΡΟΚΛΗΘΕΙ ΑΤΥΧΗΜΑ.**

ΘΕΤΩΝΤΑΣ ΤΟ ΕΡΓΑΛΕΙΟ ΣΕ ΛΕΙΤΟΥΡΓΙΑ

- **Χειριστήτε, επιθεωρήστε και συντηρήστε αυτό το εργαλείο πάντοτε σύμφωνα με όλους τους κανονισμούς (τοπικούς, εθνικούς) οι οποίοι ισχύουν για όλα τα χειροφερόμενα/χειροκίνητα εργαλεία πεπιεσμένου αέρα. Για ασφάλεια, μέγιστη απόδοση, και μέγιστη αντοχή των εξαρτημάτων, λειτουργήστε αυτό το εργαλείο με μέγιστη πίεση αέρα στην είσοδο 6.2 bar/620 kPa (90 psig) με σωλήνα τροφοδότησης αέρα εσωτερικής διαμέτρου 8 χιλιοστά (5/16").**
- **Κλείστε πάντοτε την παροχή αέρα και αποσυνδέστε τον σωλήνα παροχής αέρα πριν εγκαταστήσετε, αφαιρέσετε ή προσαρμόσετε οποιοδήποτε εξάρτημα αυτού του εργαλείου, ή πριν κάνετε οποιαδήποτε συντήρηση σε αυτό το εργαλείο.**
- **Μην χρησιμοποιείτε κατεστραμμένους, ξεθωριασμένους ή χαλασμένους σωλήνες αέρος ή συνδέσμους.**
- **Σιγουρευθείτε ότι όλοι οι σωλήνες και οι σύνδεσμοι έχουν το σωστό μέγεθος και είναι κλεισμένοι καλά. Βλέπε Σχέδιο TPD905-1 για μια τυπική σύνδεση σωλήνα.**
- **Χρησιμοποιείτε πάντα καθαρό, ξηρό αέρα με μέγιστη πίεση αέρα σε 90 psig. Η σκόνη, οι διαβρωτικές αναθυμιάσεις και/ή η υπερβολική υγρασία μπορούν να καταστρέψουν το μοτέρ ενός εργαλείου αέρος.**
- **Μην λιπαίνετε τα εργαλεία με εύφλεκτα ή πτητικά υγρά όπως η κηροζίνη, το πετρέλαιο, ή η βενζίνη για αεροπλάνα.**
- **Μην αφαιρείτε τις ετικέττες. Αντικαταστήστε οποιαδήποτε ετικέττα έχει καταστραφεί.**

ΧΡΗΣΙΜΟΠΟΙΩΝΤΑΣ ΤΟ ΕΡΓΑΛΕΙΟ

- **Φοράτε πάντοτε προστατευτικά γυαλιά όταν χρησιμοποιείτε ή όταν κάνετε συντήρηση σε αυτό το εργαλείο.**
- **Φοράτε πάντοτε ωτοασπίδες όταν χρησιμοποιείτε αυτό το εργαλείο.**
- **Κρατήστε τα χέρια, τα φαρδιά ρούχα, και τα μακρυά μαλλιά μακρυά από το περιστρεφόμενο άκρο του εργαλείου.**
- **Προσέξτε την θέση του μοχλού αναστροφής προτού λειτουργήσετε το εργαλείο ούτως ώστε να γνωρίζετε την φορά περιστροφής όταν λειτουργείτε τον μοχλό ταχύτητας.**
- **Να είστε σε επιφυλακή για ξαφνικές αλλαγές της κίνησης κατά την διάρκεια της εκκίνησης και της λειτουργίας οποιουδήποτε ηλεκτρικού εργαλείου.**
- **Κρατήστε την στάση του σώματος σταθερή και σε ισορροπία. Μην κάνετε άσκοπες κινήσεις όταν χειρίζεστε αυτό το εργαλείο. Μπορεί να αναπτυχθούν υψηλές στρεπτικές ροπές στο σημείο ή κάτω από το σημείο της συνιστώμενης πίεσης αέρα.**
- **Το αρχικό στέλεχος του εργαλείου μπορεί να συνεχίσει την κίνηση αφού έχει σταματήσει η λειτουργία του εργαλείου.**
- **Εργαλεία που λειτουργούν μπορεί να κάνουν κραδασμούς. Οι κραδασμοί, οι επαναλαμβανόμενες κινήσεις ή θέσεις που δεν είναι αναπαυτικές μπορεί να προκαλέσουν τραύματα στα χέρια και στα μπράτσα σας. Σταματήστε την χρήση του εργαλείου εάν αισθανθείτε ενόχληση, μούδιασμα, ή πόνο. Συμβουλευθείτε γιατρό πριν ξανααρχίσετε την χρήση του εργαλείου.**
- **Χρησιμοποιείτε εξαρτήματα που συνιστά η Ingersoll-Rand.**
- **Χρησιμοποιείτε μόνο υποδοχές για αερόκλειδα και εξαρτήματα. Μην χρησιμοποιείτε χρωμιούχες υποδοχές ή εξαρτήματα.**
- **Τα αερόκλειδα δεν είναι δυναμόκλειδα. Οι συνδέσεις που απαιτούν ειδικές περιστροφές πρέπει να ελέγχονται με ένα δυναμόκλειδο αφού συνδεθούν με ένα αερόκλειδο.**
- **Αυτό το εργαλείο δεν είναι σχεδιασμένο για εργασίες σε εκρηκτικές ατμόσφαιρες.**
- **Αυτό το εργαλείο δεν έχει μόνωση για να αντισταθεί σε ηλεκτρικό σοκ.**

ΣΗΜΕΙΩΣ

**Η χρήση άλλων εξαρτημάτων εκτός από τα γνήσια εξαρτηματα της Ingersoll-Rand μπορεί να έχει σαν αποτέλεσμα προβλήματα ασφαλείας, μειωμένη απόδοση στο εργαλείο, και αύξηση συντήρησης, και μπορεί να ακυρωθούν όλες οι εγγυήσεις.
Οι επισκευές πρέπει να γίνονται από ειδικό προσωπικό. Επικοινωνήστε με τον πλησιέστερο Εξουσιοδοτημένο Αντιπρόσωπο της Ingersoll-Rand.**

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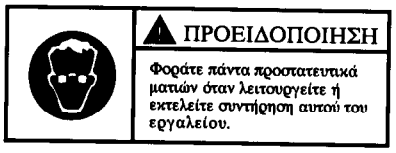
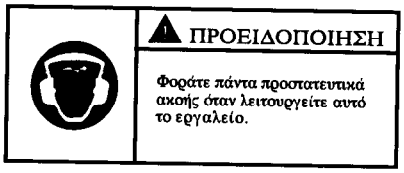
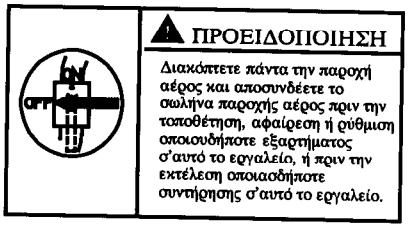
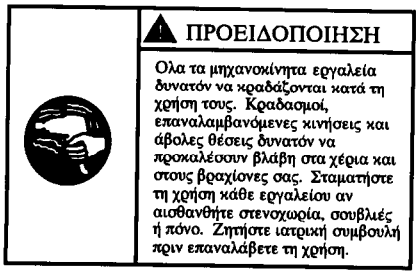
⚠ ΠΡΟΕΙΔΟΠΟΙΗΣ

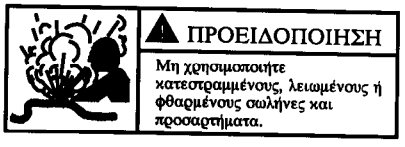
ΕΑΝ ΑΓΝΟΗΣΕΤΕ ΑΥΤΕΣ ΤΙΣ ΠΡΟΕΙΔΟΠΟΙΗΣΕΙΣ ΜΠΟΡΕΙ ΝΑ ΠΡΟΚΛΗΘΕΙ ΣΟΒΑΡΟ ΑΤΥΧΗΜΑ.

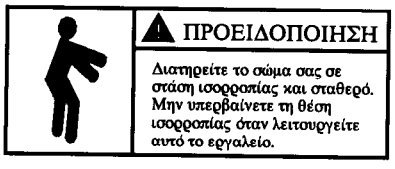


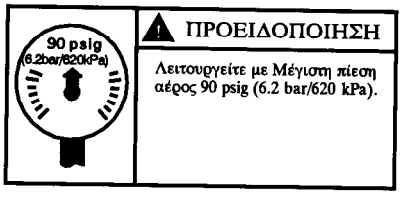


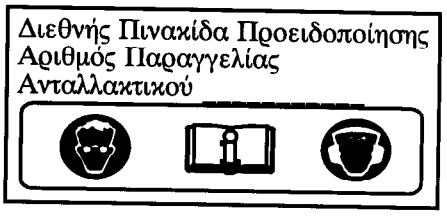












ΡΥΘΜΙΣΕΙΣ

ΡΥΘΜΙΣΤΗΣ ΠΑΡΟΧΗΣ

Το μοντέλο αερόκλειδου 1702SB1 έχει έναν ρυθμιστή ο οποίος ρυθμίζει την παροχή και στις δύο κατευθύνσεις εξ ίσου την ίδια στιγμή. Η παραγωγή παροχής μετριέται με σταμπαρισμένους αριθμούς "1" μέχρι "5".

Το μοντέλο αερόκλειδου 1702P1 και 1702P4 έχει έναν συνδυασμό ρυθμιστή/αντίστροφης βαλβίδας παροχής ο οποίος είναι σχεδιασμένος για να προσφέρει ρύθμιση παροχής προς τα εμπρός ενώ διατηρεί πλήρη παροχή προς την αντίθετη κατεύθυνση. Η παραγωγή παροχής μετριέται με σταμπαρισμένους αριθμούς "1" μέχρι "5".

ΡΥΘΜΙΖΟΝΤΑΣ ΤΟΝ ΡΥΘΜΙΣΤΗ ΠΑΡΟΧΗΣ

Ρύθμιση Παροχής για το Μοντέλο 1702SB1

Περιστρέψτε το Ρυθμιστή Παροχής (10) ούτως ώστε ένας από τους αριθμούς στον Ρυθμιστή Παροχής να ευθυγραμμίζεται με τον δείκτη που βρίσκεται στη ζάντα της Εισόδου Κορμού του Στρεπτήρα (7).

Η παροχή του **1702SB1** έχει ρυθμιστεί τώρα και για τις δύο κατευθύνσεις. Αυτή η ρύθμιση δεν θα αλλάξει ανεξάρτητα από το πόσες φορές θα μετατοπίσετε το Μοχλό Αντιστροφής εφ όσον δεν αλλάζετε την επιλογή παροχής.

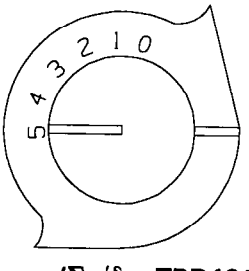
Ρύθμιση Παροχής για το Μοντέλο 1702P1 και 1702P4

Το Μοντέλο αερόκλειδου **1702P1 και 1702P4** έχει έναν ρυθμιστή παροχής μέσα στον μηχανισμό αντιστροφής ο οποίος επιτρέπει στον χειριστή να έχει είτε πλήρη παραγωγή παροχής προς μία κατεύθυνση και μειωμένη παραγωγή παροχής προς την άλλη κατεύθυνση είτε πλήρη παραγωγή παροχής και στις δύο κατευθύνσεις. Για να ρυθμίσετε τη παροχή κάντε τα ακόλουθα:

Για πλήρη παροχή και στις δύο κατευθύνσεις, περιστρέψτε την Αντίστροφη Βαλβίδα (4) μέχρι να ευθυγραμμιστεί η εγκοπή που βρίσκεται στα δύο άκρα της Αντίστροφης Βαλβίδας με τον αριθμό 5 που βρίσκεται στην κάθε πλευρά της υποδοχής.

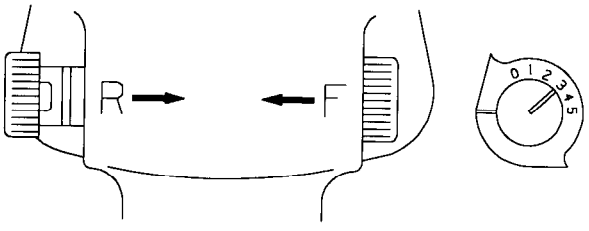
ΣΗΜΕΙΩΣ

Οι αριθμοί 0 μέχρι 5 στην υποδοχή είναι μόνο για παράπεμψη και ΔΕΝ υποδεικνύουν μία συγκεκριμένη παραγωγή παροχής. Το μηδέν (0) υποδεικνύει τη χαμηλώτερη παραγωγή παροχής ενώ το πέντε (5) υποδεικνύει την υψηλότερη.



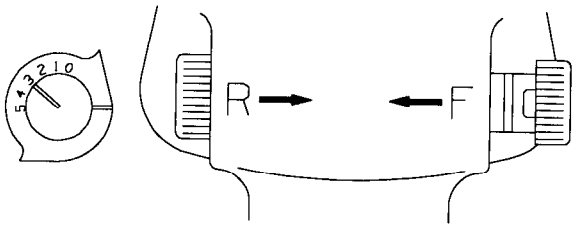
(Σχέδιο TPD1247)

Για μειωμένη παροχή προς τα εμπρός και πλήρη παροχή προς την αντίθετη κατεύθυνση, σπρώξτε την αντίστροφη βαλβίδα προς τα μέσα στην δεξιά μεριά του εργαλείου και περιστρέψτε την βαλβίδα μέχρι να ευθυγραμμιστεί η εγκοπή που βρίσκεται στη δεξιά μεριά με τον αριθμό που επιθυμείτε στη δεξιά μεριά. Αυτό προσφέρει μειωμένη παροχή προς τα εμπρός αλλά πλήρη παροχή προς τα πίσω όταν η αντίστροφη βαλβίδα είναι σπρωγμένη προς την αντίθετη κατεύθυνση.
Βλέπε Σχέδιο TPD1248.



(Σχέδιο TPD1248)

Για μειωμένη παροχή προς τα πίσω και πλήρη παροχή προς τα εμπρός, σπρώξτε την αντίστροφη βαλβίδα προς τα μέσα στην αριστερή μεριά του εργαλείου και περιστρέψτε την βαλβίδα μέχρι να ευθυγραμμιστεί η εγκοπή που βρίσκεται στην αριστερή μεριά με τον αριθμό που επιθυμείτε στην αριστερή μεριά. Αυτό προσφέρει πλήρη παροχή προς τα εμπρός αλλά μειωμένη παροχή προς τα πίσω όταν η αντίστροφη βαλβίδα είναι σπρωγμένη προς την αντίθετη κατεύθυνση.
Βλέπε Σχέδιο TPD1249.



(Σχέδιο TPD1249)

ΘΕΤΩΝΤΑΣ ΤΟ ΕΡΓΑΛΕΙΟ ΣΕ ΛΕΙΤΟΥΡΓΙΑ

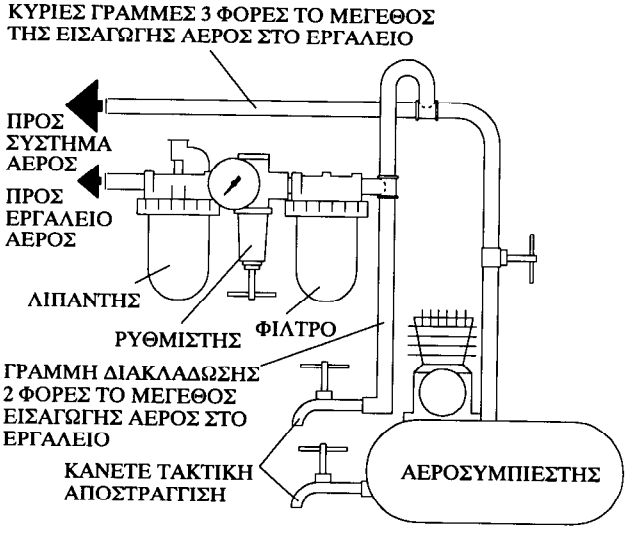
ΛΙΠΑΝΣΗ

Ingersoll-Rand No. 50 **Ingersoll-Rand No. 100**

Χρησιμοποιείτε πάντοτε ένα λιπαντή γραμμής αέρος με αυτά τα εργαλεία. Συνιστούμε το ακόλουθο συγκρότημα Φίλτρου–Λιπαντήρα–Ρυθμιστή:

Για Διεθνή- No. C26-C4-A29
Για Η.Π.Α.- No. C22-04-G00

Μετά από κάθε οχτώ ώρες λειτουργίας, εκτός και αν χρησιμοποιείται ένας λιπαντήρας αέρος, βάλτε 1,5 κυβικά εκατοστά Λάδι No. 50 της Ingersoll-Rand μέσα στην είσοδο του εργαλείου και αφήστε το εργαλείο να λειτουργήσει για λίγο.
Μετά από κάθε σαρανταοχτώ ώρες λειτουργίας, ή όπως γνωρίζετε από εμπειρία, βάλτε περίπου 3 κυβικά εκατοστά Γράσο No. 100 της Ingersoll-Rand μέσα στο Σύνδεσμο Γράσου (10, 19).



(Σχ. TPD905-1)

Μοντέλο	Τύπος χειρολαβής	Υποδοχή	Κρούσεις ανά λεπτό	Περιοχή Συνιστωμένης Ροπής Στρέψεως	■Βαθμίδα Ηχου dB (A)		♦Βαθμίδα Κραδασμών
		ίντσες		πόδια–λίμπρες (χιλιογραμμό-μετρα)	Πίεση	•Ισχύς	μέτρα/ τετραγωνικό δευτερόλεπτο
1702SB1	ευθυγραμ–μισμένη	3/8" καρέ, υποδοχή τύπου δακτύλιου	1.500	13-85 (18-115)	104,0	117,0	4,2
1702P1	πιστολέ	3/8" καρέ, υποδοχή τύπου πείρος	1.500	20-100 (27-136)	97,5	110,5	2,7
1702P4	πιστολέ	3/8" καρέ, υποδοχή τύπου πείρος	1.500	20-100 (27-136)	97,5	110,5	2,7

■ Έχει δοκιμαστεί σύμφωνα με το ANSI S5.1-1971 σε ελεύθερη ταχύτητα

♦ Δοκιμάστηκε στο ISO8662-1 με το φρένο στις 9 στροφές ανά λεπτό

• ISO3744

ΔΗΛΩΣΗ ΑΝΑΓΝΩΡΙΣΗΣ

Εμείς ***η Ingersoll-Rand, Co.***

(όνομα προμηθευτή)

78192 Trappes Cedex France

(διεύθυνση)

δηλώνουμε με αποκλειστική μας ευθύνη ότι αυτό το προϊόν,

Οι Σειρές 1702SB1, 1702P1 και 1702P4

τα οποία αφορά αυτή η δήλωση, είναι σύμφωνα με τις προβλέψεις των Εντολών

98/37/ΕΚ.

Χρησιμοποιώντας τις ακόλουθες Αρχές Κανονισμών: ***ISO8662***

Κλίμακα Αύξοντος Αριθμού: ***(1999 →) X99A XXXXX →***

D. Vose	*Kevin R. Morey*
Όνομα και υπογραφή εξουσιοδοτημένων προσώπων	*Όνομα και υπογραφή εξουσιοδοτημένων προσώπων*
Μάϊος, 1999	***Μάϊος, 1999***
Ημερομηνία	*Ημερομηνία*

ΣΗΜΕΙΩΣ

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ. ΜΗΝ ΤΙΣ ΚΑΤΑΣΤΡΕΦΕΤΕ.

Όταν λήξει η διάρκεια ζωής του εργαλείου, συνιστάται να γίνει αποσυναρμολόγηση του εργαλείου, να απογρασσαριστεί και να χωριστούν τα εξαρτήματα ανά υλικό για να ανακυκλωθούν.

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