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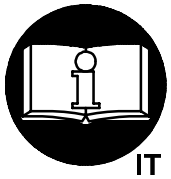
OPERATIONS AND MAINTENANCE MANUAL FOR MODEL 7RAQT4 TAPPER

NOTICE

Model 7RAQT4 Tapper is designed for tapping operations in the aerospace, automotive, appliance, electronic, machining and furniture industries.
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 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.
- The Reverse Valve Cap and Actuating Valve Cap are under Spring pressure. Use care when removing either Cap.
- 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.

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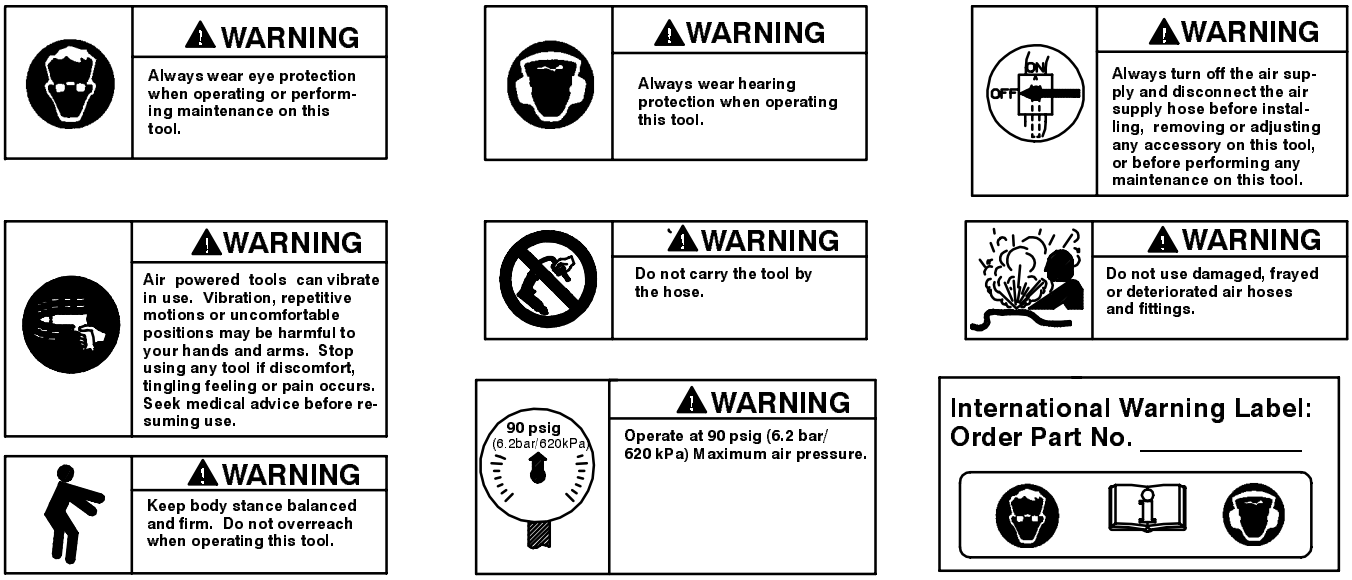
PROFESSIONAL TOOLS

WARNING LABEL IDENTIFICATION

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.



PLACING TOOL IN SERVICE

LUBRICATION

Ingersoll–Rand No. 10 **Ingersoll–Rand No. 28**
Ingersoll–Rand No. 67

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

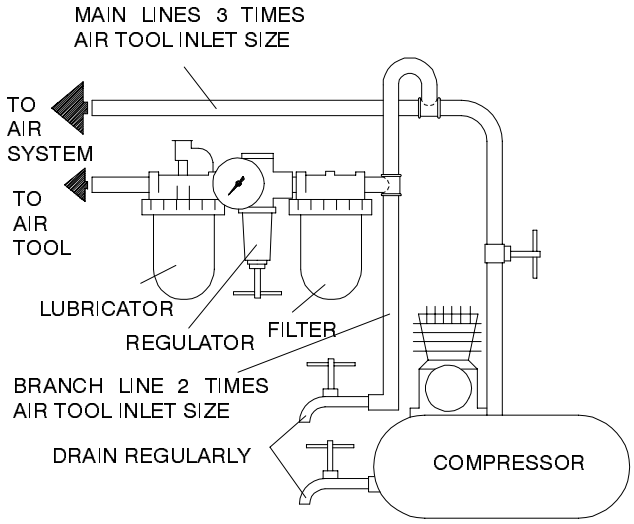
For USA – No. C22–04–G00
For International – No. C16–C3–A29

Motor

After each eight hours of operation, or as experience indicates, inject approximately 1.5 cc of Ingersoll–Rand No. 10 Oil into the Inlet Bushing Assembly.

Gearing

After each 50,000 cycles or each month of operation, whichever comes first, inject approximately 9 cc of Ingersoll–Rand No. 28 Grease into the Grease Fitting.



(Dwg. TPD905–1)

HOW TO ORDER A TAPPER

PISTOL GRIP

Model	Free Speed	Tapper Capacity in	Tapper Capacity mm
7RAQT4	475	1/2	13

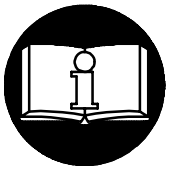
F

MANUEL D'EXPLOITATION ET D'ENTRETEIN POUR MODÈLE 7RAQT4

NOTE

La taraudeuse Modèle 7RAQT4 est destinée aux opérations de taraudage dans les industries de l'aérospatiale, de l'automobile, des appareils ménagers, de l'électronique, de l'usinage et des meubles.
Ingersoll–Rand ne peut 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'EMPLOYEUR EST TENU DE COMMUNIQUER LES INFORMATIONS DE CE MANUEL AUX EMPLOYÉS UTILISANT CET OUTIL.
LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT 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 intérieur.**
- **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. La poussière, les fumées corrosives et/ou une humidité excessive peuvent endommager le moteur d'un outil pneumatique.**
- **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 cheveux 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 peuvent se produire à, ou en dessous, de la pression d'air recommandée.**
- **La rotation des accessoires de l'outil peut continuer pendant un certain temps après le relâchement de la gâchette.**
- **Les outils pneumatiques peuvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables peuvent causer des douleurs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de douleurs. Consulter un médecin avant de recommencer à utiliser l'outil.**
- **Utiliser les accessoires recommandés par Ingersoll-Rand.**
- **Le chapeau de la soupape d'inversion et le chapeau de la soupape de commande sont soumis à la pression d'un ressort. Prendre les soins nécessaires lors de la dépose de l'un de ces chapeaux.**
- **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 peut causer des risques d'insécurité, réduire les performances de l'outil et augmenter l'entretien, et peut annuler toutes les garanties.

Les réparations ne doivent être effectuées que par des réparateurs 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.

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PROFESSIONAL TOOLS

SIGNIFICATION DES ETIQUETTES D'AVERTISSEMENT

⚠ ATTENTION

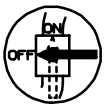
LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT CAUSER DES BLESSURES

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

⚠ ATTENTION

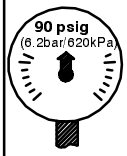
Ne pas transporter l'outil par son flexible.

⚠ ATTENTION

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

⚠ ATTENTION

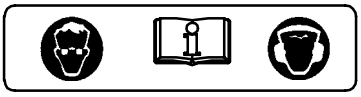
Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil.



⚠ ATTENTION

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

Etiquette d'avertissement internationale:
Commander Pièce No._____



MISE EN SERVICE DE L'OUTIL

LUBRIFICATION

Ingersoll–Rand No. 10

Ingersoll–Rand No. 28
Ingersoll Rand No. 67

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

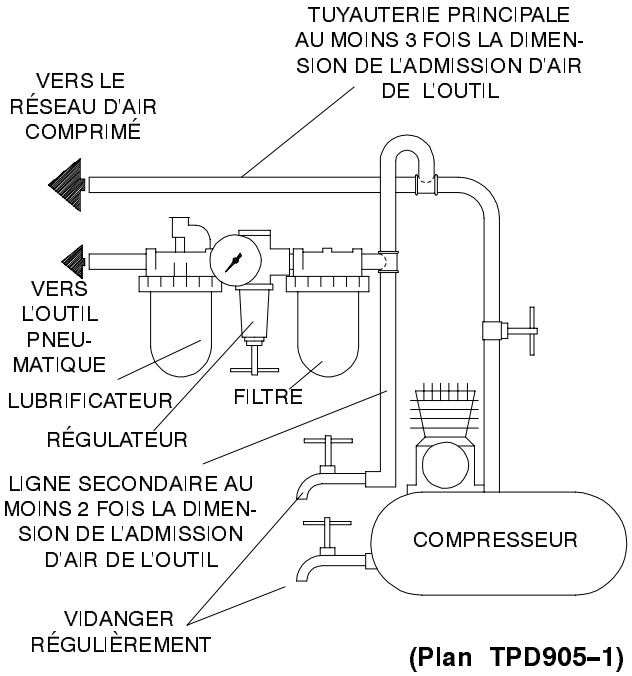
For USA – No. C22–04–G00
International – N°. C16–C3–A29

Moteur

Toutes les huit heures de fonctionnement, ou en fonction de l'expérience, injecter environ 1,5 cm^3 de graisse Ingersoll–Rand No. 10 dans le raccord d'admission.

Pignonnerie

Tous les 50 000 cycles ou tous les mois de fonctionnement, au minimum, injecter environ 9 cm^3 de graisse Ingersoll Rand No. 28 dans le raccord de graissage.



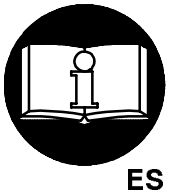
(Plan TPD905–1)

E

MANUAL DE FUNCIONAMIENTO Y MANTENIMIENTO PARA ROSCADORAS MODELO 7RAQT4

NOTA

La Roscadora Modelo 7RAQT4 está diseñada para operaciones de roscado en las industrias aeroespacial, del automóvil, de electrodomésticos, electrónica, mecánica y del mueble. 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 de 90 psig (6,2 bar/620 kPa) en la 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 accesorios dañados, desgastados ni deteriorados.**
- **Asegúrese de que todas las mangueras y accesorios 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 presión máxima de 90 psig. 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 estrangulación.**
- **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.**
- **La tapa de válvula de inversión y la de válvula de actuación están presionadas por el muelle. Tenga cuidado al sacar cualquiera de las tapas.**
- **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

Usar siempre protección para los oídos al manejar esta herramienta.

⚠ 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

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

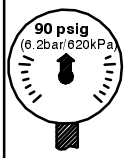
No coger la herramienta por la manguera para levantarla.

⚠ ADVERTENCIA

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

⚠ ADVERTENCIA

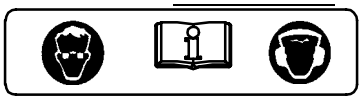
Mantener una postura del cuerpo equilibrada y firme. No estirar demasiado los brazos al manejar la herramienta.



⚠ ADVERTENCIA

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

Etiqueta de Aviso Internacional:
Pida Pieza No. _____



PARA PONER LA HERRAMIENTA EN SERVICIO

LUBRICACIÓN

Ingersoll-Rand Nº 10

Ingersoll Rand No. 28
Ingersoll-Rand No. 67

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

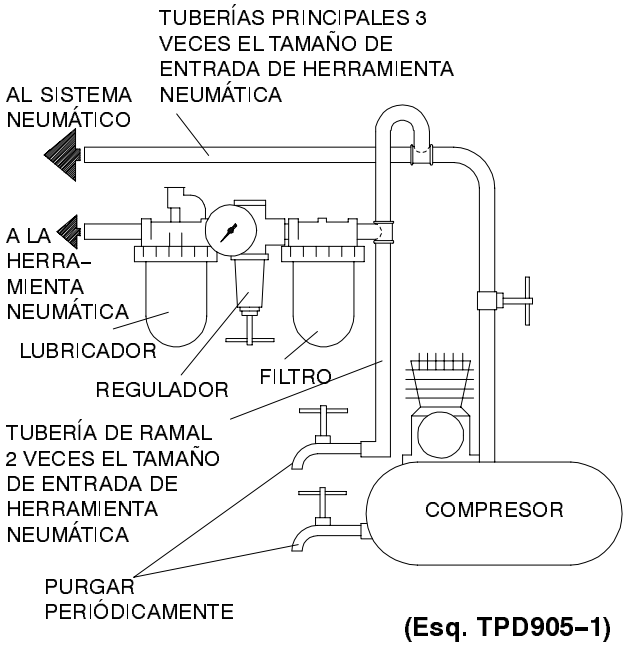
For USA - No. C22-04-G00
Internacional - Nº C16-C3-A29

Motor

Después de cada cuarenta y ocho horas de uso, o como indique la experiencia, inyecte aproximadamente 1,5 cc de Aceite Ingersoll–Rand Nº 10 en el Conjunto de Casquillo de Admisión.

Engranajes

Después de cada 50.000 ciclos o cada mes de uso, (lo que ocurra primero), inyecte aproximadamente 9 cc de Grasa Ingersoll–Rand Nº 28 en el Engrasador.



(Esq. TPD905–1)

MANUAL DE FUNCIONAMENTO E MANUTENÇÃO PARA ATARRAXADOR MODELO 7RAQT4

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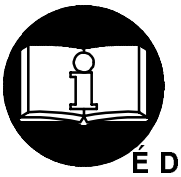
AVISO

O Atarraxador Modelo 7RAQT4 é concebido para operações de tampamento em indústrias aeroespacial, automotiva, de equipamento, electrónica, de maquinário e de móveis. 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 8mm (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 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.
- O Tampo da Válvula Reversa e o Tampo da Válvula Actuante estão sob pressão da Mola. Tenha cuidado ao remover qualquer um destes Tampos.
- 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

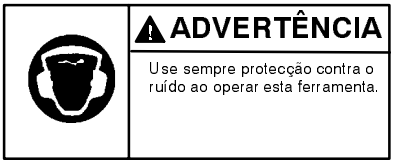
IDENTIFICAÇÃO DO RÓTULO DE ADVERTÊNCIA

⚠ 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

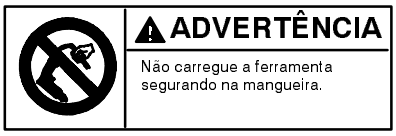
Use sempre protecção contra o ruído ao operar esta ferramenta.

⚠ 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.

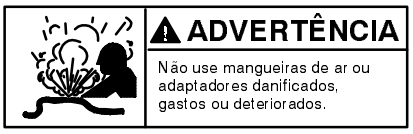
⚠ ADVERTÊNCIA

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.



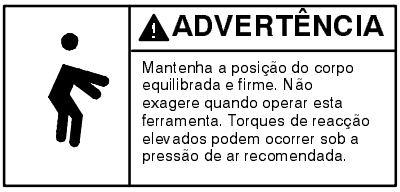
⚠ ADVERTÊNCIA

Não carregue a ferramenta segurando na mangueira.



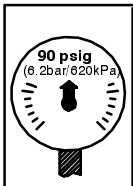
⚠ ADVERTÊNCIA

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



⚠ ADVERTÊNCIA

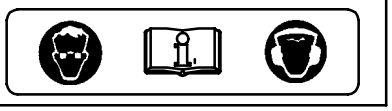
Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer sob a pressão de ar recomendada.



⚠ ADVERTÊNCIA

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

Rótulo de Advertência Internacional No. de Referência para Pedido _____



COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

LUBRIFICAÇÃO

Ingersoll–Rand No. 10 **Ingersoll–Rand No. 28**
Ingersoll–Rand No. 67

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

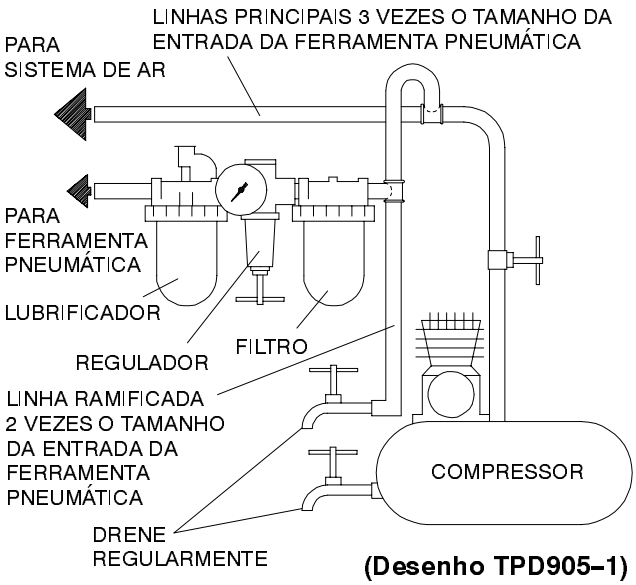
For USA – No. C22–04–G00
Para Internacional – No. C16–C3–A29

Motor

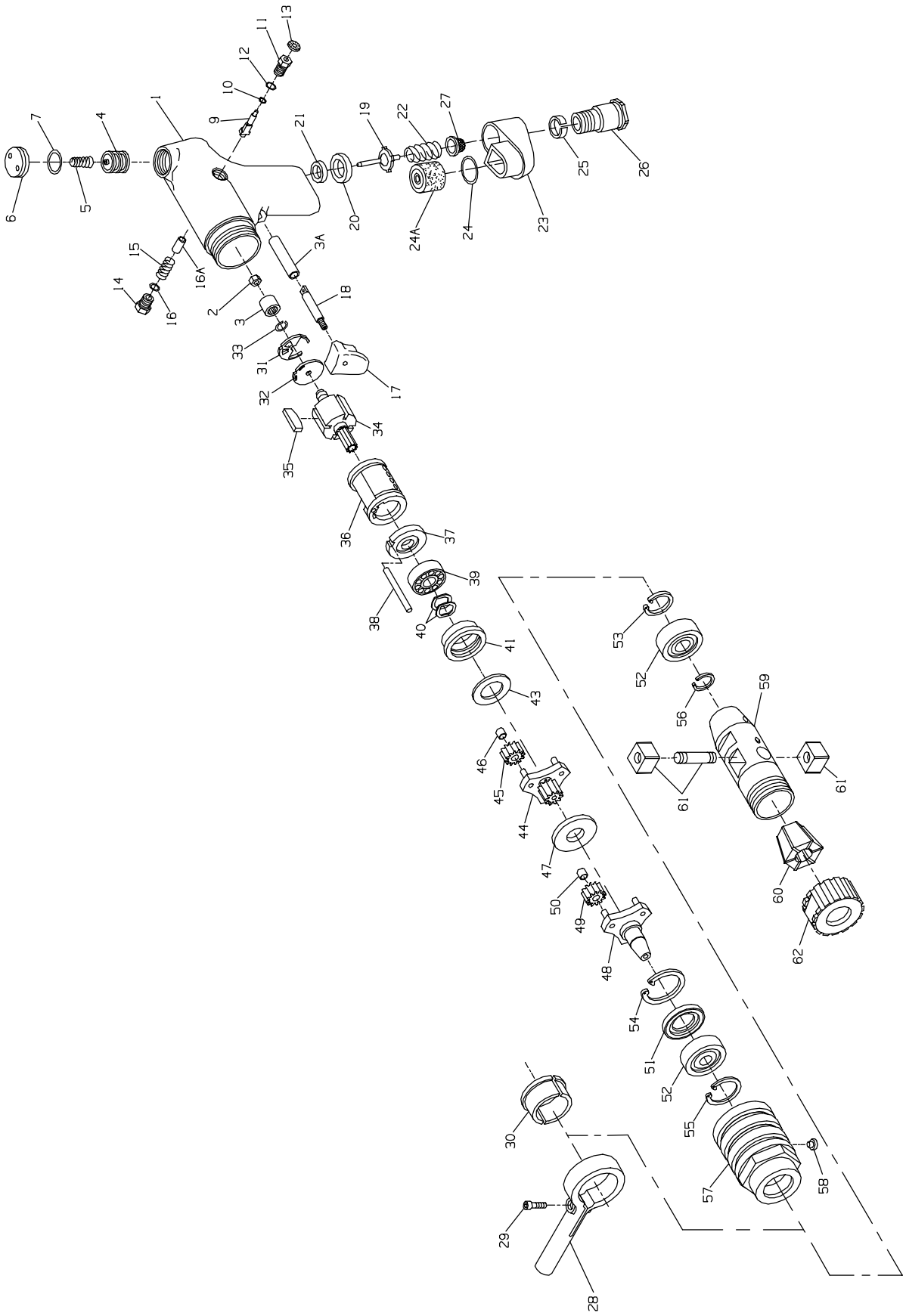
Depois de cada oito horas de operação, ou como a experiência indicar, injecte cerca de 1,5 cc de Óleo Ingersoll–Rand No.10 no Conjunto dos Rolamentos de Entrada.

Engrenagem

Depois de 50 000 ciclos ou cada mês de operação, o que ocorrer primeiro, injecte aproximadamente 9 cc de Massa Lubrificadora Ingersoll–Rand No. 28 no Adaptador de Massa Lubrificadora.



(Desenho TPD905–1)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(Dwg. TPA907–4)

			PART NUMBER FOR ORDERING
		Motor Housing Assembly	
		for model 7RAQT4	7RA–A40
		for model 7RAQT4–EU	7RA–EU–A40
	1	Motor Housing	
		for model 7RAQT4	7RA–B40
		for model 7RAQT4–EU	7RA–EU–B40
+	2	Bearing Ejecting Nut	
		for hex recess housing	7AH–105
		for round recess housing	7AH–105A
♦ •	3	Rear Rotor Bearing	7AH–24
	3A	Trigger Bushing	4RA–91
	*	Warning Label	
		for 7RA–B40	WARNING–7–99
		for 7RA–EU–B40	EU–99
	4	Reverse Valve	7RA–329
	5	Reverse Valve Spring	7RA–515
	6	Reverse Valve Cap	7RA–269
♦ •	7	Reverse Valve Cap Seal	7RA–358
		Actuating Valve Assembly	7RA–A516
	9	Actuating Valve	7RA–B516
♦ •	10	Actuating Valve Face	R2F–167
	11	Actuating Valve Bushing Assembly	7RA–A518
♦	12	Valve Bushing Seal	R0BR1C–283
	13	Actuating Valve Button	7RA–520
	14	Actuating Valve Cap Assembly	7RA–A517
	15	Actuating Valve Spring	7RA–519
•	16	Actuating Valve Cap Seal	R0BR1C–283
•	16A	Actuating Valve Bumper	7RA–664
		Trigger Assembly	7AH–A93
	17	Trigger	5RA–93
	18	Trigger Pin	7AH–94

			PART NUMBER FOR ORDERING
♦	19	Throttle Valve	7RAK–302
♦	20	Throttle Valve Seat	7RAK–303
	21	Throttle Valve Seat Support	7RAK–304
♦	22	Throttle Valve Spring	7AH–51
	23	Muffler Assembly	3RA–A123
♦ •	24	Muffler O–ring	85H–167
♦	24A	Muffler Element	7RA–311
	25	Inlet Bushing Spacer	7AH–65
	26	Inlet Bushing Assembly	7AH–A565
♦ •	27	Air Strainer Screen	R0A2–61
	28	Dead Handle	R1A–48
	29	Pinch Bolt	510–638
	30	Dead Handle Adapter (2)	7A–49
	*	Nameplate	
		for model 7RAQT4	4RA–301
		for model 7RAQT4–EU	4RA–EU–301
♦	31	Rear End Plate Gasket	7RL–739
	32	Rear End Plate	7RL–12
♦	33	Rear End Plate Retainer	7AH–118
	34	Rotor	7RLK–53
♦ •	35	Vane Packet (set of 4 Vanes)	7RL–42–4
	36	Cylinder	7RL–3
	37	Front End Plate	7AH–11
	38	Cylinder Dowel	7AH–98
♦ •	39	Front Rotor Bearing	R1–22
	40	Bearing Spring Washer (2)	7AH–278
	41	Front Rotor Bearing Housing	7AH–13
	43	Bearing Housing Spacer	7AH–81
	44	Gear Head	7AQ–216

* Not illustrated.

♦ Indicates Tune–up Kit part.

• 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.

\+ Use 7AH–105 (hex nut) in housings with hex recess. Use 7AH–105A (round nut) in housings with round recess.

		PART NUMBER FOR ORDERING
45	Gear Head Planet Gear Assembly (3) (21 teeth)	7AP–A10
46	Gear Head Planet Gear Bearing (1 for each Gear)	7AH–500
47	Gear Head Spacer	7AN–80
48	Spindle	7RAQT4–8A
49	Spindle Planet Gear Assembly (3) (19 teeth)	7AQ–A10
50	Spindle Planet Gear Bearing (1 for each Gear)	7AJ–500
51	Grease Shield	7AH–701
52	Spindle Bearing (2)	7RAQT–510
53	Spindle Bearing Spacer	7RAQT–111
54	Spindle Bearing Retainer	7AH–28
55	Spindle Bearing Seat	7RAQT–118
56	Spindle Retainer	R4800–119
57	Gear Case Assembly	7RAQT–B37
58	Grease Fitting	D0F9–879
59	Tap Chuck	7RAQT4–99
60	Chuck Collet	4U–103–1/2
61	Chuck Back Jaw Assembly	4U–102
62	Chuck Nut	4U–104
*	Chuck Nut Wrench	4U–253
*	Chuck Body Wrench	7RAQT4–254
*	Tap Chuck Removal Wedge (2)	7RAQT4–200
*	Tune–up Kit (includes illustrated parts 3, 7, 10, 12, 19, 20, 22, 24, 24A, 27, 31, 33, 35 and 39)	7RA–S/D–TK1

* Not illustrated.

MAINTENANCE SECTION

⚠ WARNING

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

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

LUBRICATION

Each time the Model 7RAQT4 Tapper is disassembled for maintenance, repair or replacement of parts, lubricate the tool as follows:

1. **Motor**
   Use Ingersoll–Rand No. 10 Oil for lubricating the motor. Inject a few drops of oil into the air inlet before attaching the air hose.
2. **Bearings**
   Fill the Bearings to 50% capacity with Ingersoll–Rand No. 28 Grease.
3. **Bevel Gear**
   Apply light coat of Ingersoll–Rand No. 67 Grease to bevel gear.
4. **Gear Train**
   Single Reduction – Apply 4.5 – 6 cc of Ingersoll–Rand No. 28 Grease.
   Double Reduction – Apply 6 – 7.5 cc of Ingersoll–Rand No. 28 Grease.

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 Tool

1. Using two No. 7RAQT4–200 Tap Chuck Removal Wedges, remove the Tap Chuck (59).
2. Lightly grasp the handle of the Motor Housing (1) in leather–covered or copper–covered vise jaws so that the Spindle (48) is upward.

NOTICE

Be careful not to drop the Planet Gears on the floor.

3. Using an adjustable wrench, grasp the flats on the Gear Case (57) and unscrew the Gear Case from the Motor Housing. Lift the Gear Case along with the gearing from the Motor Housing.
4. Remove the Motor Housing from the vise, and grasp the pinion end of the Rotor (34) in the vise. Make certain to use leather–covered or copper–covered vise jaws. Withdraw the motor from the Motor Housing.

Disassembly of the Gearing

1. If the Bearing Housing Spacer (43) remained with the Gear Case (57) when the tool was disassembled, slide it from the bore of the Gear Case.
2. While holding the Gear Case vertically with the Spindle (48) upward, tap the Case gently against the surface of a workbench to jar the Gear Head (44), Gear Head Planet Gears (45) and Gear Head Spacer (47) from the Gear Case.
3. Using a pair of snap–ring pliers, remove the Spindle Retainer (56) from the Spindle (48).
4. While holding the Gear Case vertically with the Spindle upward, tap the Case gently against the surface of a workbench to jar the Spindle (48) and Spindle Planet Gears (49) from the Gear Case.
5. Using a pair of snap–ring pliers, remove the Spindle Bearing Retainer (54) from the Gear Case.
6. Withdraw the Grease Shield (51) from the Gear Case.
7. Note that there is a Spindle Bearing Spacer (53) between the inner rings of the two Spindle Bearings (52). If the Spindle Bearings are to be removed, maneuver the Spindle Bearing Spacer so that it is off center in relation to the Spindle Bearings and so that its split ends do not show.
8. Stand the Gear Case, large end down, on the table of an arbor press and using a 1/2" (13 mm) diameter dowel, carefully press against the Spindle Bearing Spacer to remove the one Spindle Bearing and the Spacer.
9. Using snap–ring pliers, remove the Spindle Bearing Seat (55) from the Gear Case.
10. Using a sleeve that contacts the outer race of the bearing, press the second Spindle Bearing from the Gear Case.
11. If the Spindle Planet Gear Bearings (50) and Gear Head Planet Gear Bearings (46) are to be replaced, press the old bearings from their respective Planet Gears.

Disassembly of the Motor

1. Slide the Front Rotor Bearing Housing (41) along with the two Bearing Spring Washers (40) from the Front Rotor Bearing (39).
2. Grasp the pinion end of the Rotor in leather–covered or copper–covered vise jaws so that the Rear End Plate is upward.

CAUTION

Make certain the End Plate Retainer (33) does not fly off the pliers when it is slipped off the hub of the Rotor.

3. Using a pair of external snap ring pliers with just the tips of the pliers inserted between the ends of the End Plate Retainer, spread the Retainer enough to remove it from the groove in the hub of the Rotor.
4. Lift off the Rear End Plate, Cylinder (36) and Vanes (35).
5. Check the Front Rotor Bearing for damage or roughness. If replacement is necessary, support the Front End Plate (37) between two blocks of wood on the table of an arbor press, and press the Rotor from the Front Rotor Bearing.

Disassembly of the Reverse Valve

1. Unscrew the Reverse Valve Cap (6) and remove the Reverse Valve Spring (5). If the Reverse Valve Cap Seal (7) is damaged, remove it from the recess in the Housing (1).
2. Thread a No. 8–32 thread cap screw into the top of the Reverse Valve (4) and pull the Reverse Valve from the Motor Housing.

Disassembly of the Throttle Mechanism

NOTICE

A 10 mm hexagon socket fits the Actuating Valve Bushing (11).

1. Unscrew the Actuating Valve Bushing from the Motor Housing (1), and remove the entire Actuating Valve Assembly and Actuating Valve Spring (15).

NOTICE

A 10 mm hexagon socket fits the Actuating Valve Cap (14).

2. Unscrew the Actuating Valve Cap.
3. Unscrew the Inlet Bushing (26) and remove the Inlet Bushing Spacer (25), Air Strainer Screen (27), Muffler Assembly (23), Muffler Element (24A), Throttle Valve Spring (22) and Throttle Valve (19).
4. Withdraw the Trigger Assembly.
5. If the Throttle Valve Seat (20) and Throttle Valve Seat Support (21) are to be replaced, withdraw them from the handle with a stiff wire hook.

Disassembly of the Pistol Grip Motor Housing

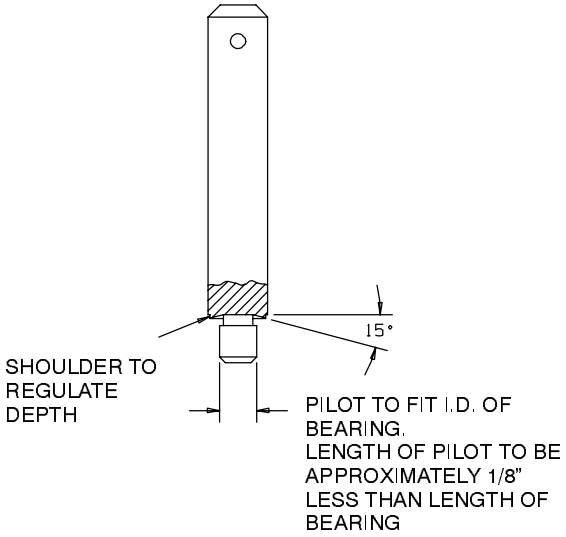
1. Grasp the handle of the Motor Housing (1) in leather–covered or copper–covered vise jaws.
2. If the Rear Rotor Bearing (3) is to be replaced, remove the old Bearing by threading a No. 10–24 thread cap screw into the Bearing Ejecting Nut (2) and jack the Bearing from the Housing.

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 into 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. Except for bearings, always clean every part and wipe every part with a thin film of oil before installation.
5. Check every bearing for roughness. If an open bearing must be cleaned, wash it thoroughly in a suitable cleaning solution and dry with a clean cloth. **Sealed or shielded bearing should never be cleaned.** Workgrease thoroughly into every open bearing before installation.
6. Apply a film of O–ring lubricant to all O–rings before installation
7. Unless otherwise noted, always press on the stamped end of a needle bearing when installing the needle bearing in a recess. Use a bearing inserting tool similar to the one shown in Dwg. TPD786.

Needle Bearing Inserting Tool



(Dwg. TPD786)

Assembly of the Pistol Grip Motor Housing

1. If the Rear Rotor Bearing (3) was removed, install a new bearing.
2. Place the Bearing Ejecting Nut (2) in the small recess at the bottom of the bore in the Motor Housing (1).
3. Using a bearing inserting tool that has a pilot to fit the inside of the Bearing, and a shoulder that contacts the outer radius on the bearing shell, press the Rear Rotor Bearing, **stamped end trailing**, into the bearing recess of the Motor Housing until it is about 0.010" (0.25 mm) below flush. Inject 0.5 cc of grease into the Bearing.

Assembly of the Throttle Mechanism

1. The Actuating Valve (9) can be assembled in either side of the Motor Housing (1), depending upon operator preference.

NOTICE

A 10 mm hexagon socket will fit the Actuating Valve Cap (14).

2. Install the Actuating Valve Cap Seal (16) on the Actuating Valve Cap and thread the Cap into the side of the Motor Housing. Tighten it to 4 to 6 ft-lb (5.4 to 8 Nm) of torque.
3. Install the Valve Bushing Seal (12) on the Actuating Valve Bushing (11).
4. Install the Actuating Valve Face (10) in the groove on the Actuating Valve (9), and insert the small end of the Actuating Valve into the threaded end of the Bushing until it protrudes from the opposite end.
5. Press the Actuating Valve Button (13) on the small diameter of the Actuating Valve (9).
6. Place the Actuating Valve Spring (15) in the cross-bore of the Motor Housing so that it enters the recess in the Actuating Valve Cap.

NOTICE

A 10 mm hexagon socket will fit the Actuating Valve Bushing.

7. Take the assembled Actuating Valve and Bushing, and thread the Bushing into the cross-bore so that the end of the Actuating Valve enters the bore of the Spring. Work the Actuating Valve a few times to see that it functions smoothly. Tighten the Actuating Valve Bushing to 4 to 6 ft-lb (5.4 to 8 Nm) of torque.
8. Change the position of the Motor Housing in the vise so that the handle is vertical and the entrance to the handle upward.

NOTICE

The Throttle Valve Seat is symmetrical. If one side appears worn, turn the Seat over so that the good side will face the Throttle Valve (19).

9. Insert the Throttle Valve Seat Support (21) into the tapped bore of the handle and follow it with the Throttle Valve Seats. Push them into place with a 1/2" (13 mm) dowel.
10. Install the assembled Trigger (17) and Trigger Pin in the trigger bushing.
11. Installation of the Throttle Valve is sometimes a bit tricky due to the smallness of the Valve and the depth of the bore in which it is located. The difficult part is in holding the Valve while inserting the long end of the valve stem through the hole in the trigger stem. Although the Valve can be held with a push-button mechanical drafting pencil or a wooden dowel, one of the easiest ways to hold it is by using a common wooden pencil with rubber eraser. Insert the short end of the valve stem into the rubber eraser full depth; then back it out far enough so that the Valve is just nicely supported. Insert the Valve into the bore of the handle so that the long end of the stem enters the hole in the Trigger Stem. Pull outward on the Trigger to hold the Valve while removing the pencil.
2. Place the Air Strainer Screen (27), closed end first, inside the large end coil of the Throttle Valve Spring (22).
13. Insert the Throttle Valve Spring and Screen, small coil first, into the handle so that the slip-ring encircles the end of the Throttle Valve.
14. Moisten the Muffler O-ring (24) with O-ring lubricant, and slip it over the perforated baffle of the Muffler (23).
15. Place the Muffler on the face of the handle so that the perforated baffle extends into the handle.
16. Slide the Inlet Bushing Spacer (25) over the threaded end of the Inlet Bushing (26), and install the Inlet Bushing in the handle. Tighten it to 25 ft-lb (34 Nm) of torque.

Assembly of the Reverse Valve

1. Grasp the handle in leather-covered or copper-covered vise jaws so that the bore of the Motor Housing is horizontal.
2. Slide the Reverse Valve (4), tapped end trailing, into the reverse valve bushing.
3. Place the Reverse Valve Spring (5) on top of the Reverse Valve.
4. If the Reverse Valve Cap Seal (7) was removed, carefully snap a new Seal in place on the rim of the reverse valve bushing.
5. Install the Reverse Valve Cap (6). Tighten it to 7 to 9 ft-lb (9.5 to 12 Nm) of torque.

Assembly of the Motor

1. Slide the Front End Plate (37), flat side first, over the splined end of the Rotor (34).
2. Using a sleeve that contacts only the inner ring of the Front Rotor Bearing (39), press the Bearing onto the splined hub of the Rotor until it seats against the Front End Plate.
3. The clearance between the Front End Plate and Rotor is critical. While holding the Front End Plate, gently tap the splined end of the Rotor with a plastic hammer until you can insert a 0.001" feeler gauge or shim between the face of the Rotor and End Plate.

4. Grasp the splined end of the Rotor in leather–covered or copper–covered vise jaws so that the short hub of the Rotor is upward.
5. Place the Cylinder (36) down over the Rotor and against the Front End Plate. The exhaust holes perpendicular to the cylinder axis **MUST** be at the five o'clock position when looking down through the Cylinder at the Front End Plate.
6. Wipe each Vane (35) with a light film of the recommended oil and place a Vane in each slot in the Motor. Make certain the vane slots are clean.
7. Place the Rear End Plate (32), flat side first, over the short hub of the Rotor.

NOTICE

Make certain the Retainer does not fly off the pliers as you slip it on the hub of the Rotor.

8. Install the Rear End Plate Retainer (33) in the groove on the hub of the Rotor.

Assembly of the Gearing

1. Using snap–ring pliers, install the Spindle Bearing Seat (55) in the groove nearest the small end of the Gear Case (57).
2. Using a sleeve that contacts the outer ring of the bearing, press the Spindle Bearing (52) in the Gear Case until it contacts the Spindle Bearing Seat.
3. Place the Grease Shield (51), flange side first, against the Spindle Bearing.
4. Using snap–ring pliers, install the Spindle Bearing Retainer (54) in the groove in the Gear Case adjacent to the Grease Shield.
5. Stand the Gear Case on the table of an arbor press with the small end upward.
6. Place the Spindle Bearing Spacer (53) on the inner ring of the Spindle Bearing that has already been pressed into the Gear Case.

CAUTION

Do not press the second Spindle Bearing too far. Press it in only far enough so that its inner ring contacts the Spindle Bearing Spacer.

7. Using a sleeve that contacts the outer ring of the bearing, carefully press the second Spindle Bearing into the Gear Case until it contacts the Spindle Bearing Spacer.
8. Insert the Spindle (48), tapered end first, into the threaded end of the Gear Case (57) and through the bore of both Spindle Bearings and the Spindle Bearing Spacer.
9. Using snap–ring pliers, install the Spindle Retainer (56) in the groove on the Spindle.

NOTICE

Always press against the stamped end of the Bearing.

10. If the Spindle Planet Gear Bearings (50) or the Gear Head Planet Gear Bearings (46) were removed from their respective Planet Gears, press in new Planet Gear Bearings using a bearing inserting tool that has a pilot that fits the bore of the Bearing and a shoulder that contacts the outer radius of the Bearing. Press all Bearings flush or slightly below flush with the face of their respective Planet Gear. Work some grease into each Bearing.
11. Work some of the recommended grease into the gear teeth inside the Gear Case.
12. Place a Spindle Planet Gear (49) on each planet gear shaft.
13. Place the Gear Head Spacer (47) inside the Gear Case against the face of the Spindle Planet Gears.
14. Work some grease into the gear teeth on the Gear Head (44) and insert the Gear Head, pinion end first, in the Gear Case so that it meshes with the Spindle Planet Gears.
15. Place a Gear Head Planet Gear (45) on each planet gear shaft.
16. Insert the Bearing Housing Spacer (43) in the Gear Case so that it seats against the internal gear teeth.

Assembly of the Tool

1. Position the Rear End Plate Gasket (31) in the bottom of the bore of the Motor Housing (1) so that the dowel hole and air inlet ports in the Gasket align with those in the Motor Housing.
2. Using an assembly dowel 3/32" x 10" (2.3 mm x 254 mm), align the dowel groove in the Front End Plate (37), Cylinder (36) and Rear End Plate (32). Place the assembly rod in the aligned grooves so that about 3" (75 mm) of the rod extends beyond the Rear End Plate. Insert the extension into the dowel hole in the Motor Housing and slide the motor into the Motor Housing until it seats.
3. Withdraw the assembly dowel and insert the Cylinder Dowel (38). When properly positioned, the Cylinder Dowel should be slightly below the surface of the Front End Plate.
4. Place the two Bearing Spring Washers (40) inside the Front Rotor Bearing Housing (41).
5. Slide the Front Rotor Bearing Housing over the Front Rotor Bearing.
6. Thread the assembled Gear Case (57) onto the Motor Housing, and tighten it to 40 ft–lb (54 Nm) of torque. Run the motor at reduced air pressure while tightening the Gear Case. Listen to make certain there is non scoring.
7. Wipe the tapered section of the Spindle (48) and Tap Chuck (59) clean and dry, and install the Tap Chuck on the Spindle.

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Loss of Power	Low air pressure	Check air supply. For top performance, the air pressure must be 90 psig (6.2 bar/620 kPa) at the inlet.
	Plugged Air Strainer Screen or Inlet Screen	Clean the Air Strainer or Inlet Screen in a clean, suitable, cleaning solution. If the Screen cannot be cleaned, replace it.
	Clogged Muffler or Exhaust Silencer	Clean the Muffler Element in a clean, suitable, cleaning solution. If it cannot be cleaned, replace it.
	Worn or broken Vanes	Replace the **complete** set of Vanes.
	Damaged Rear End Plate Gasket	Install a new Rear End Plate Gasket.
	Worn or broken Cylinder	Replace the Cylinder if it is cracked or if the bore appears wavy or scored.
	Improper lubrication or dirt build--up	Clean the Motor Unit parts and lubricate as instructed.
Leaky Throttle Valve	Worn Throttle Valve and/or Throttle Valve Seat	Install a new Throttle Valve and/or a ThrottleValve Seat.
	Dirt accumulation on Throttle Valve and/or Throttle Valve Seat	Pour about 3 cc of a clean, suitable, cleaning solution in the air inlet and operate the tool Valve for about 30 seconds. **Immediately** pour 3 cc of the recommended oil in the air inlet and operate the tool for 30 seconds to lubricate all the cleaned parts.
Tool will not function in reverse	Contamination in air--thrown Reverse Valve chamber	Clean all reverse valve parts in a clean, suitable, cleaning solution.
	Damaged parts	Replace any parts that are damaged or worn.

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.