

TDI

TURBOTWIN™

T20

Air Starter

APPLICATION VERSATILITY

- Suitable for starting diesel and gas engines up to 8 liters.
- Engine applications include Ford 460, Cummins 5.9, John Deere 4045, GM 454 and Continental TM27 engines.

SIMPLICITY

- The integrated relay valve eliminates the need for lengthy pre-engagement lines simplifying installation and reducing costs.
- Features modular construction with serviceable parts providing users with simple and low cost overhaul.

CONTAMINATED SUPPLY

LOW AIR CONSUMPTION

- Configured with the same rugged turbine motor design used in the complete line of **TURBOTWIN** starters.
- The **TURBOTWIN** motor is highly resistant to damage caused by wet or hard contaminated air/gas.
- The efficient twin turbine motor delivers more torque using less air/gas than previous starter designs.
- Standard pressure (4 nozzle) and low pressure (12 nozzle) versions available.

NO MAINTENANCE DESIGN and ENVIRONMENTALLY SAFE

- Maintenance free design with grease-packed bearings for the life of the starter.
- No external lubrication required as there are no rubbing parts.
- Eliminates lubricator problems, installation expense, system maintenance, and the messy/hazardous oil film around the starter exhaust.

HEAVY DUTY CONSTRUCTION

- Constructed from durable, corrosion resistant, and high quality materials.
- Major components are made from high strength aluminum or steel alloy.

BROAD RANGE of OPERATION

- Lightweight at only 22.5 lbs. (10.2 Kg)...the T20 is capable of delivering over 15 HP at only 20 psig.
- Pressure ranges from 20 psig (1.4 BAR) to 150 psig (10 BAR).
- Compressed air and natural gas compatible.

BROAD RANGE of OPERATION

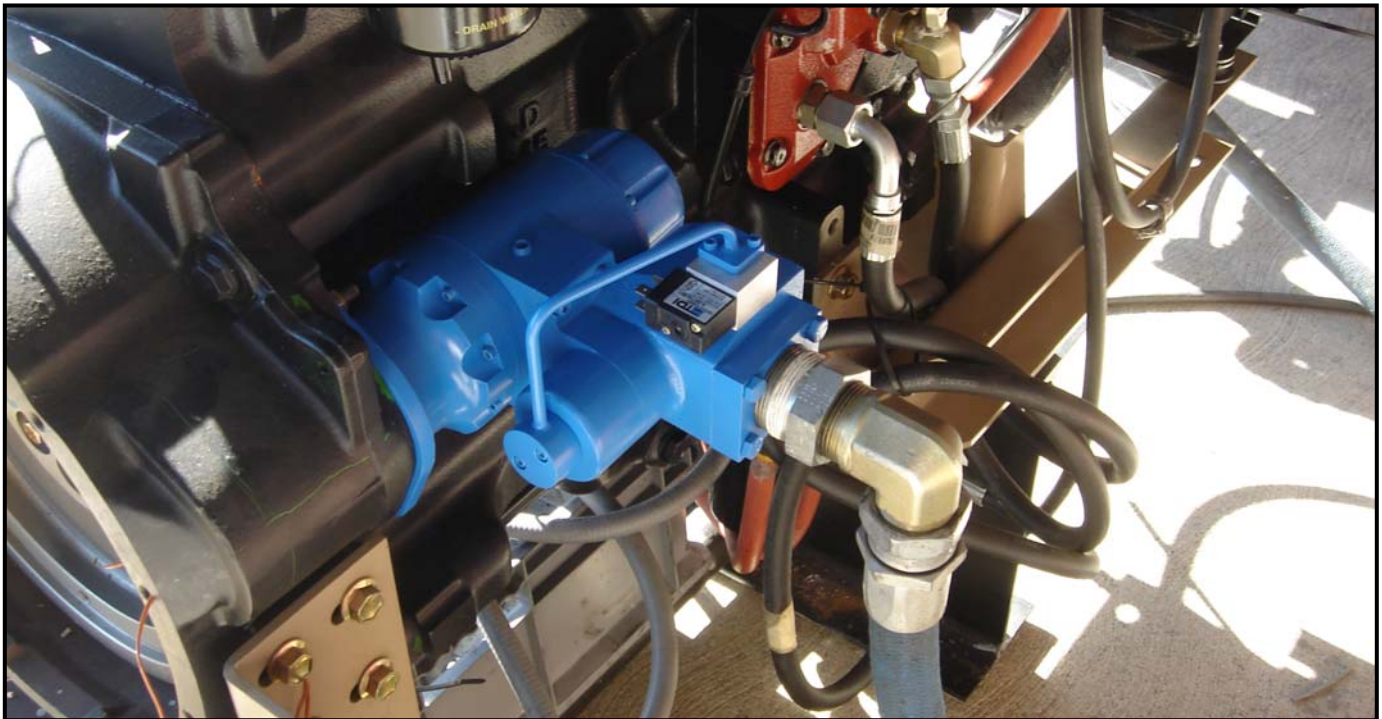
- The high horsepower of the turbine air motor combined with a planetary gear speed reducer results in a very efficient and reliable unit.
- A pair of axial flow turbines coupled to a planetary gear reduction set powers the T20.

From **TECH DEVELOPMENT**

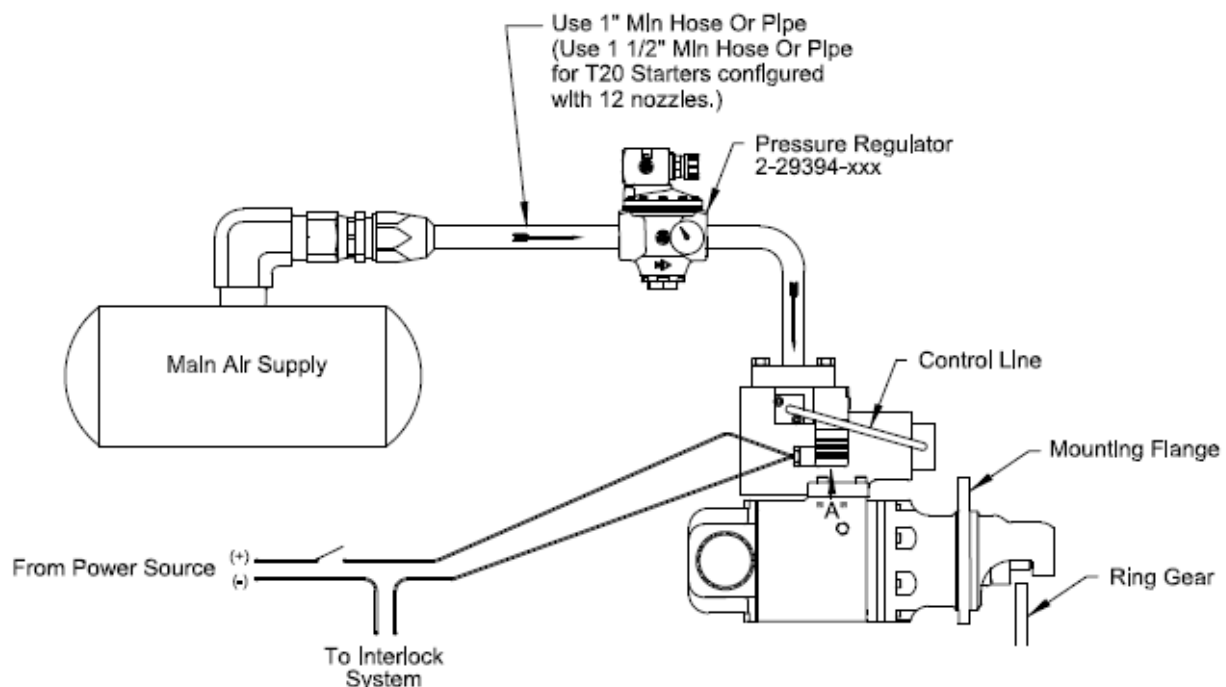
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DEVELOPMENT HISTORY

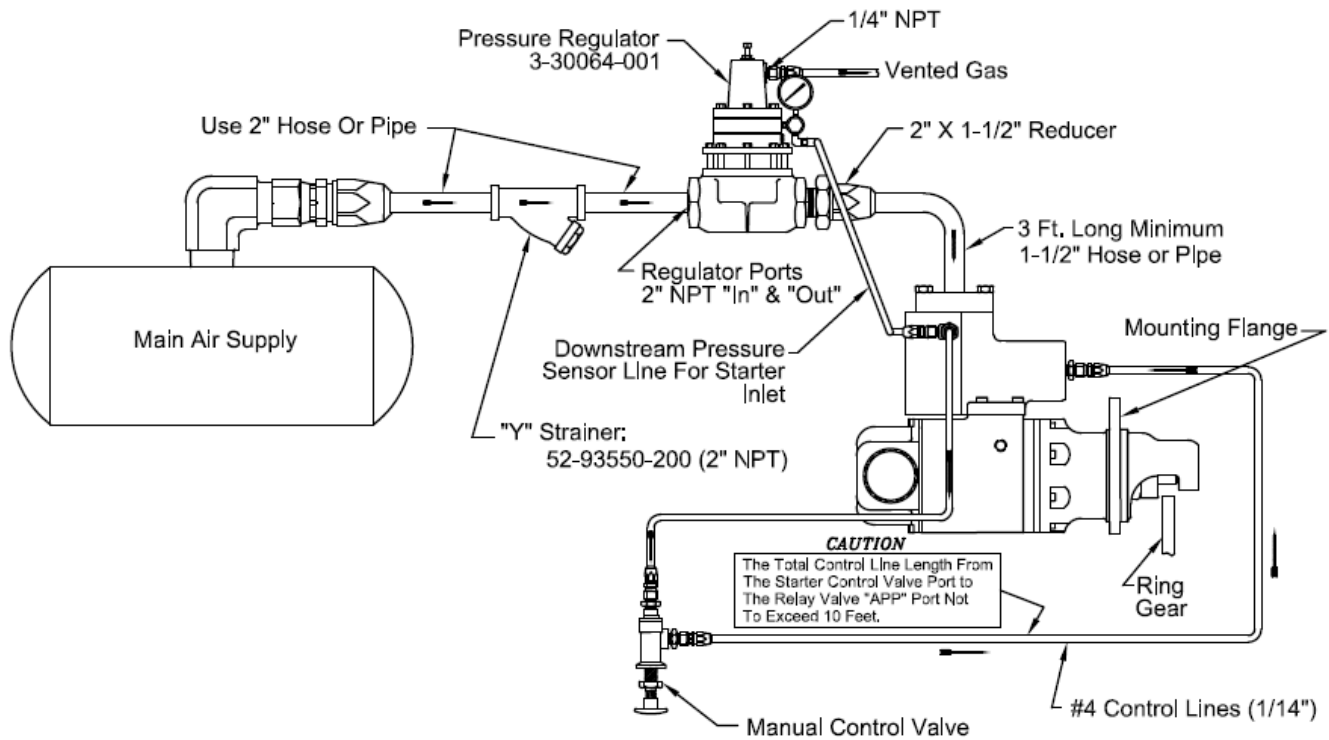
- Tech Development introduced the first turbine technology for starting industrial engines in 1979.
- The T20 features an innovative and more reliable turbine motor than anything on the market today.
- The *TURBO**TWIN* T20 is the result of TDI's continuing turbine starter design innovations.



TYPICAL INSTALLATION



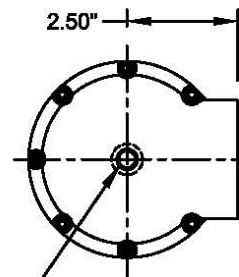
TYPICAL INSTALLATION



TDI TURBOTWIN
T20

DIMENSIONAL DATA

TDI TURBOTWIN T20



Exhaust Pressure Check
1/8" NPT

2" NPT
Exhaust Elbow
w/ Screen
2-29676-001
2-29672

Supply Inlet
"C"
6.57"
1" NPT, 1 1/2" NPT
OR
6.85"
ISO 228 G 1 1/4" (BSPP)

4.0"
Dia.

Inlet Pressure Check
1/8" NPT

3-Prong Mini-Din
IOS 43650 Form "B"
Male only Connection
14-26 VDC

Relay Valve
Assembly
RLVA-29543-002
Mounting Surface

SAE 1
Cummins 5.9
3.499"
3.495"
Pilot Dia

Ring Gear
.58"
Pinion Travel

MODEL	"B" dlm	"C" dlm	"D" dlm	"E" dlm	"F" dlm	"G" dlm	"H" dlm	"I" dlm
60155	9.26"	5.37"	6.54"	3.19"	1.94"/2.06"	9.30"	6.89"	7.97"
60173	9.26"	5.37"	6.54"	3.19"	1.94"/2.06"	9.30"	6.89"	7.97"
60172	10.25"	6.36"	7.53"	2.20"	.87"/.95"	10.30"	7.88"	8.96"
60175	9.95"	6.06"	7.23"	2.50"	1.17"/1.25"	10.0"	7.58"	8.66"
Cummins 5.9								
60163	9.26"	5.37"	6.54"	3.19"	1.94"/2.06"	9.30"	6.89"	7.97"
SAE 3								
60162	9.26"	5.37"	6.54"	3.19"	1.94"/2.06"	9.30"	6.89"	7.97"

Exhaust Pressure Check
1/8" NPT

"G" Mounting Surface

2" NPT
Straight Exhaust
w/ Screen
2-29926
2-29672

Exhaust
Screen
Support
Ring
w/Screen
2-29814
2-29672

Exhaust
Deflector
w/ Screen
2-29681
2-29672

Left Hand-ccw Right Hand-cw
Shaft Rotation

Cummins 5.9 Flange
P/N 2-29910

SAE 1 Flange
P/N 2-29909

SAE 3 Flange
P/N 2-29911

